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ABSTRACT

Designed for the full-time, professional trainer, this manual is intended for use as a resource in conducting a short course for occasional instructors in the fundamentals of training. It is written in a modular format so that users can select those modules, or parts of modules, that meet the specific needs of their target audience. Trainer's outlines are provided for half-day, one-day, and the complete two-day courses. The introductory chapter discusses the need for training the occasional trainer. Each of the following eight chapters deals with an individual concept or aspect of training: defining the audiovisual aids, evaluation of group dynamics, and trainer styles. In each chapter are an instructor's guide and a course guide. The instructor's guide contains background information, theory, and examples. Contents of the course guide include a sheet detailing purpose, module objective, time required, suggested audience, lists of text and reference material, equipment and supplies, as well as training methods, lecture notes (a detailed outline with suggested exercises and activities) and handouts. (YLB)

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TRAINING THE OCCASIONAL TRAINER

Completed by the
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TRADE

TRAINING RESOURCES AND DATA EXCHANGE

WHAT IS TRADE?

Training Resources and Data Exchange (TRADE) refers to a series of activities designed to increase communication and exchange of ideas, information, and resources among Department of Energy contractor facilities in the field of human resource development. TRADE activities are planned and implemented by the DOE Contractor TRADE Committee. The Committee Charter, adopted in November 1978 specifies that:

> "THE PURPOSE OF THE DOE CONTRACTOR TRAINING RESOURCES EXCHANGE COMMITTEE (TO BE KNOWN AS PROJECT TRADE COMMITTEE) IS TO ENCOURAGE AND FACLITATE THE EXCHANGE OF IDEAS, TECHNIQUES, AND RESOURCES FOR IMPROVING HUMAN RESOURCE DEVELOPMENT WITHIN THE DOE CONTRACTOR COMMUNITY. THIS MAY BE ACCOMPLISHED THROUGH THE FOLLOWING:
>
> - TRAINING RESOURCES INVENTORIES
> - CONFERENCES/WORKSHOPS
> - PUBLICATIONS
> - TASK GROUPS"

WHO IS INVOLVED IN TRADE ACTIVITIES?

The Department of Energy contractor system is comprised of over 70 laboratories and production facilities owned by DOE and operated by independent organizations under the provisions of a prime contract. Currently the DOE contractor network includes over 100,000 workers and capital investments greater than $12 billion. Two-thirds of these facilities have participated in one or more TRADE activities within the last six years.

HOW IS THE DEPARTMENT OF ENERGY INVOLVED?

The strength of TRADE rests with its emphasis on peer-to-peer exchange. TRADE activities are undertaken by DOE contractors for DOE contractors. Some TRADE activities have proven to be beneficial to organizations outside of the DOE system, including other federal agencies and educational institutions. Representatives from the Office of Industrial Relations (OIR), DOE serve as advisors to the TRADE Committee. From the very beginning, OIR has supported TRADE as a mechanism for maintaining the effectiveness and quality of the contractor work force.

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FOREWORD

HOW TO USE THIS MANUAL

Much of the training at DOE-owned, contractor-operated facilities is conducted by supervisors, managers, and senior staff who have expertise in their own subject areas but lack formal preparation in training. The purpose of this manual is to assist these once-in-a-while or occasional trainers in improving their effectiveness as trainers.

This manual is written for the full-time, professional trainer to use as a resource in conducting a short course (one-half to three days) for occasional instructors in the fundamentals of training. The introductory chapter discusses the need for training the occasional trainer. Each following chapter deals with an individual concept or aspect of training—methods, instructional objectives, evaluation, etc.—and contains an Instructor's Guide (background information, theory, examples) and a Course Guide (lecture notes, handouts, suggested activities). It is written in a modular format so that users can select only those modules, or parts of modules, that meet the specific needs of their target audience of occasional trainers. The use of jargon is minimized so that those conducting the course can reproduce appropriate sections to give occasional trainers additional written information. It is not recommended that this book be simply handed to part-time trainers as a self-study manual, as the art of instructing includes many skills that are most effectively learned through demonstration and supervised practice.

The basic philosophy of this manual is that training should be learner-oriented and should involve the learners as much as possible. All too often trainers rely solely on the lecture method, without giving trainees a chance to practice the skills being taught. Overreliance on one method decreases training's only value: the learning it produces and the actual change in the behavior of the trainees back on the job.

This course can be presented in whole or in part depending on the needs of the audience and the time available. The complete course requires two days. A one-day course, and a half-day course are also possible (see the outlines below). It is important to keep in mind that this course depends upon the participation of the trainees, so whenever possible use all the skill practice exercises incorporated in the Course Guide.

This manual is learner-oriented and written in a modular format so that users can select only those modules that meet the specific needs of the target audience of occasional trainers.

This manual is learner-oriented. In order to establish this approach from the outset, allow a short period of time at the beginning of the course for a sharing of expectations by the trainees. Have the trainees introduce themselves and in pairs or small groups allow them time to share their personal expectations about the course. These are people who are not necessarily comfortable with training. As the trainer, you too should share your expectations for the training session. Let the participants know what is expected of them and what criteria will be used to measure the success of the course. It is important that this be clear from the beginning.

The major topics or modules covered in each course are listed below.

Half-Day Course

Instructional Objectives
Training Methods

One-Day Course

Defining Your Audience
Instructional Objectives
Training Plan
Training Methods

Two-Day Course

Defining Your Audience
Instructional Objectives
Training Plan
Training Methods
Audio-Visual Aids
Evaluation
Group Dynamics
Trainer Styles

TRAINER'S OUTLINE
Half-Day Course—4 Hours

TIME	TOPIC	PROCESS
8:00–8:20	Welcome and Sharing of Expectations	Trainer introduces him/herself and offers trainees opportunity to introduce themselves and share expectations for the training session.
INSTRUCTIONAL OBJECTIVES		
8:20–8:40	Illustrated Lecture	Trainer will deliver a brief overview of need for instructional objectives and the characteristics of instructional objectives.
8:40–8:50	Group Exercise	As a group, trainees give examples of specific tasks and create possible objectives.
8:50–9:05	Illustrated Lecture	Trainer presents overview of the three types of instructional objectives.
9:05–9:15	Group Exercise	As a group, trainees give examples of specific knowledge, skill and attitude objectives which match workplace situations.
9:15–9:40	Small Group Formation	Trainees are divided into groups of three to practice writing realistic examples of the three types of instructional objectives.
9:40–9:50	Break	
TRAINING METHODS		
9:50–10:45	Lecture and Discussion	Trainer presents a brief overview of adult learning and the four most widely used training methods. Each technique is explained, demonstrated, and discussed with the aid of handouts and skill practice exercises.
10:45–11:45	Group Exercise	Participants are divided into three smaller groups. Each group is assigned a training technique and given the necessary material with which they will design a 10-minute presentation.
11:45–12:00	Conclusion/Evaluation	Trainer offers trainees an opportunity to discuss the training session and possible benefits. An evaluation/reaction form should be completed by trainees.

TRAINER'S OUTLINE
One-Day Course—8 Hours

TIME	TOPIC	PROCESS
8:00-8:20	Welcome and Sharing of Expectations	Trainer introduces him/herself and offers trainees the opportunity to introduce themselves and share expectations of the training session.
DEFINING YOUR AUDIENCE		
8:20-8:30	Illustrated Lecture	Trainer delivers a brief overview of the importance of defining the audience before meeting them.
8:30-9:15	Group and Individual Exercises	Trainer takes the participants through a series of exercises which will enable them to recognize the questions to be answered in regard to a group of trainees: who they are and why they are in a training session. A handout is included to help the prticipants analyze the needs of the trainers.
INSTRUCTIONAL OBJECTIVES		
9:15-9:35	Illustrated Lecture	Trainer delivers a brief overview of the need for instructional objectives and the characteristics of instructional objectives.
9:35-9:45	Group Exercise	As a group, participants give examples of specific tasks where training might be needed and develop possible objectives for those tasks. Discuss and critique those developed.
9:45-10:15	Small Group Exercise	Trainees are divided into groups of three to practice writing instructional objectives. Each trainee presents his/her objectives and the trainer circulates among the groups to provide assistance.
10:15-10:25	Break	
10:25-10:40	Illustrated Lecture	Trainer presents an overview of the three types of instructional objectives.
10:40-10:50	Group Exercise	As a group, trainees offer examples of specific knowledge, skill, and attitude objectives which correlate to workplace situations.

TIME	TOPIC	PROCESS
10:50-11:15	Small Group Exercise	Trainees are divided into groups of three to practice writing realistic examples of the three types of instructional objectives while the trainer circulates among the groups to provide assistance.
TRAINING PLAN		
11:15-11:40	Illustrated Lecture	Trainer presents two brief overviews: (1) definition and benefits derived from writing a training plan and (2) the structure of a training plan.
11:40-11:55	Guided Discussion	Trainer and trainees develop a training plan for a typical training situation.
11:55-12:00	Summary	Trainer sums up morning's work and explains afternoon activities—writing a training plan and overview of training methods.
12:00-1:00	Lunch	
1:00-1:30	Small Group Exercise	Trainees are divided into three smaller groups to have opportunity to design a training plan.
1:30-2:00	Presentation of Training Plans	Trainer reconvenes class. Each small group presents training plan to class, receiving comments and feedback from the trainer and trainees.
TRAINING METHODS		
2:00-2:15	Illustrated Lecture	Trainer presents a brief overview on introduction to Training Methods with the aid of a handout.
2:15-3:30	Lecture, Guided Discussion, Demonstration, and Practice	Trainer presents information on the four most widely used training methods. Each technique is explained, demonstrated, and discussed with the aid of handouts and skill practice exercises.
3:30-3:45	Break	
3:45-4:45	Small Group Exercise	Participants are divided into three smaller groups. Each group is assigned a training method and given the necessary material with which they will design a 10-minute presentation. In turn each group delivers their presentation to the larger group.
4:45-5:00	Conclusion/Evaluation	Trainer offers trainees an opportunity to discuss the training session and possible benefits derived. An evaluation/reaction form should be completed by the trainees.

TRAINER'S OUTLINE
Two-Day Course—16 Hours

This outline begins with Day 2—it follows directly after the one day course outline presented above.

TIME	TOPIC	PROCESS
8:00-8:30	Welcome and Review	Trainer initiates a guided discussion of the topic covered the previous day, encouraging the participants to highlight the important areas. If a reaction questionnaire was presented on the previous day, the results should be given.
AUDIO-VISUAL AIDS		
8:30-8:50	Illustrated Lecture	Trainer delivers a brief overview of learning modes and the importance of audio-visual aids to a presentation with the aid of a handout.
8:50-9:10	Lecture and Equipment Demonstration	Using a handout, the trainer discusses and demonstrates the proper use of several types of audio-visual aids.
9:10-10:00	Group Exercise	Trainees are given the opportunity to practice a short presentation which incorporates the use of one or more audio-visual aids.
10:00-10:15	Guided Discussion	Trainer reconvenes the class encouraging a discussion of what was learned during the group exercise. Questions are listed.
10:15-10:25	Break	
EVALUATION		
10:25-10:35	Illustrated Lecture	Trainer presents a brief overview of the importance of evaluation to a training session and the four types of evaluation in a training program.
10:35-10:45	Illustrated Lectures	Trainer presents background information gathered from a reaction questionnaire and areas covered.
10:45-11:00	Group Exercise	Trainees are given the opportunity to discuss value of reaction questionnaires (with use of handout) and to create a questionnaire.
11:00-11:10	Illustrated Lecture	Trainer presents background information on what is measured by learning evaluation and the four types of learning evaluation.

TIME	TOPIC	PROCESS
11:10-11:20	Guided Discussion	Trainees give examples of training situations. The trainer responds with how the four types of learning evaluation would be used to evaluate the skills and knowledge gained.
11:20-11:30	Lecture and Guided Discussion	Trainer presents a brief overview of what performance tests measure and initiates a guided discussion on the advantages and disadvantages of a performance test, with the aid of a handout.
11:30-11:45	Group Exercise	As a group, trainees construct a performance test for a typical training task.
11:45-12:00	Summary	Trainer reviews areas covered and explains afternoon's activities.
12:00-1:00	Lunch	
1:00-1:15	Illustrated Lecture	Trainer presents a brief overview of what written tests measure and the types available for use.
1:15-1:30	Optional Group Exercise	Using a handout, trainees give examples of training which match each type of written tests.
GROUP DYNAMICS		
1:30-2:00	Illustrated Lecture	Trainer presents three brief lectures, with use of flipchart on introduction to group dynamics, the three stage model of group dynamics, and the individual group member roles.
2:00-2:30	Group Exercise	Trainees gain practice in "observer-participant" skills in group dynamics, helping them to recognize the natural roles played within a group. Handouts are provided for descriptions of the various roles to be enacted.
TRAINER STYLES		
2:30-2:40	Illustrated Lecture	Trainer presents a brief overview of how individual assumptions about learning and behavior patterns affect a group of trainees.
2:40-2:50	Illustrated Lecture	Trainer presents a brief overview of various instruments used for assessing training styles

TIME	TOPIC	PROCESS
2:50-3:00	Break	
3:00-4:30	Lecture, Individual Exercise, Small Group Exercise	Trainer introduces and discusses Brostrom's inventory and the four basic trainer styles. This is followed by the trainees completing and scoring their own inventory. Trainees are then divided into small groups of 4 to discuss and share attitudes. Time can be made for reconvening of whole group for answering of questions and evaluating benefits derived from completing the inventory.
4:30-5:00	Conclusion/Evaluation	Trainer offers trainees an opportunity to discuss the training session and possible benefits derived. An evaluation/reaction form should be completed by the trainees.

WHY TRAINING

Why train the occasional trainer? Occasional trainers are generally selected to be instructors from time to time because they are good at their jobs. These men and women are experts in the skills and knowledge they are teaching, and after all, knowledge of the subject is one of the requirements of good instructing. True, but being a subject matter expert is not enough.

> As a technician once sarcastically remarked, "Old Johnson sure has moved up in the world. He used to bore one person for half an hour; as an instructor he now bores 30 or 40."

Instructing requires different skills and knowledge than those needed to produce work. Instructors must produce learning in their trainees. This requires defining instructional objectives and effective use of methods and techniques that will involve learners and cause them to learn.

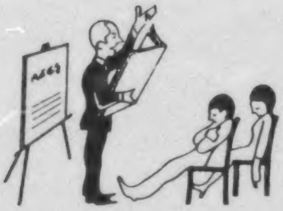
Much has been written about effective training but unfortunately, it is oriented toward the full-time professional trainer. This manual takes the most practical and useful information and activities and translates them into a meaningful course for once-in-a-while instructors. Information comes from training professionals and proven courses for occasional trainers used by DOE contractors and other companies such as utilities and R&D firms.

WHAT'S IN IT FOR THE FULL-TIME TRAINER?

Improving the effectiveness of once-in-a-while trainers is important to the organization as it contributes directly to R&D and production objectives. In most cases subject matter experts are in the best position to provide short-term, job-specific training because they know the job and the personnel to be trained. Helping supervisors and senior staff improve their training skills is often a more efficient and effective approach than hiring outside "experts."

Contractors conducting "train the trainer" courses for part-time instructors have found that providing this service not only improves the training effectiveness of occasional trainers, but also enhances the visibility and credibility of the training office or group with management. There are also additional benefits:

- A more accurate perception of the role of the training group
- Identification of additional training needs
- An increasing demand for training office services



Given limited resources, some organizations have adopted a "train the trainers" approach as a strategy for increasing the level of quality training through developing a cadre of competent occasional trainers. This provides subject matter experts with opportunities for professional development as instructors and has occasionally resulted in the transfer of selected individuals to the training group.

TRAINING: MORE AN ART THAN A SCIENCE

Many supervisors and senior staff avoid instructing whenever possible, often because they do not understand what training is. Scientific, technical, and support personnel operate in an environment where they plan and conduct certain actions and achieve certain results, which can be planned and measured. Supervisors give directives, which are then carried out.

In contrast, the training environment is much less predictable. Trainees react to the instructor and the instruction in diverse, sometimes conflicting ways. You cannot direct someone to learn and expect it to happen. Learning takes place inside the mind of each trainee, and only to the extent that he or she is a willing participant.

Occasional trainers who don't understand that instructing is more an art than a science approach a training assignment as they would any other job assignment, which inevitably leads to frustrations such as:

- Why doesn't it go like I planned?
- Why can't I see any results?
- Why can't I seem to accomplish anything?

In addition to these frustrations occasional trainers have other concerns and fears about this once-in-a-while assignment:

- It takes time away from my principal job responsibilities.
- I don't get recognition from my boss.
- Management doesn't allow adequate preparation time.
- The audience may be hostile or unreceptive.
- I am insecure about how I will perform.
- No one has ever shown me how to do this thing called training.

Is it any wonder that part-time instructors hesitate to train others? Since training is only one of their many job responsibilities, occasional instructors don't identify themselves as trainers and usually lack the interest and justification for attending an off-site course for beginning trainers. There are numerous commercially available week-long courses for beginning trainers, and much has been written about effective training methods. Very little of this, however, is available to or appropriate for anyone other than the full-time professional trainer.

This manual is designed to help occasional trainers develop their knowledge and skills in the science and art of instructing. Defining your audience, developing instructional objectives and training materials, and conducting other planning activities may be called a science. These activities, which are covered in separate chapters of this manual, are important ingredients of effective training. Their application in the actual conduct of training sessions, however, is truly an art. The art of instructing encompasses the use of different methods to involve the learners, to develop one's own style, and to understand how groups function. The essence of this art is to mold the training to the trainees so that they become motivated to learn.

WHO ARE OCCASIONAL TRAINERS?

Occasional trainers are managers, supervisors, senior staff, and others who are assigned the task of instructing on an intermittent or infrequent basis. In most cases the task of instructing is a minor, rather than a major job responsibility and is probably not in the job description. Training responsibilities may require the individual to develop or deliver presentations as often as once a week or as infrequently as twice a year.

Typical situations in which occasional trainers are used include the following:

- Presentations by supervisors on new or revised technical procedures
- Instruction for newly hired technicians in standard operating procedures
- Seminars on general job-related safety
- Safety training on job-specific policies and procedures required by DOE or the company.
- Orientation of new employees in personnel policies and benefits
- Instruction in operation or maintenance of newly purchased equipment by senior technicians trained by the manufacturer
- Word processor training for clerical personnel

Occasional trainers are as diverse as the situations in which their expertise is employed. Though the occupational groups from which part-time instructors are recruited are too numerous to mention, some of the more common ones are listed below:

Managers
First-line supervisors
Scientists
Engineers
Technicians
Craftworkers
Clerical personnel
Custodians

Administrative assistants
Health and safety specialists
Process operators
Maintenance personnel
Personnel representatives
Procurement specialists
Quality control specialists
Data processing personnel

BUILDING MANAGEMENT SUPPORT

Let's assume you are convinced of the need for a short course in training fundamentals and the benefits to the organization and the training group. What are the next steps?

- Obtain the support of your management.
- Identify the target audience.
- Adapt this manual to their needs.
- Announce the schedule for the course.

Right? Wrong! This sequence leaves out one crucial step:

- Develop an awareness of the need and benefits of training among line managers.

Suppose You Gave a Course and Nobody Came

Many a trainer has invested considerable time and energy in developing such courses only to have few occasional trainers attend. As was discussed earlier, some of the difficulties faced by occasional trainers are that their management doesn't provide adequate recognition or preparation time for training activities. Given this low priority, it is doubtful managers will encourage or allow their staff to attend. Convincing line managers of the need for and benefits of such training is essential. This will not only increase the number of occasional trainers who attend your course, but will make them more motivated learners since management has made it a priority.

Know Your Organization

The first part of this chapter presented the rationale for training occasional trainers. The remainder will discuss strategies for building management support. Two basic strategies are used by trainers in other DOE contractors:

1. A systems approach
2. A case-by-case approach

In the systems approach the manager of the training office attempts to convince other managers of the need through staff meetings, upper management, or as a partial response to visible performance problems or newly issued training requirements. The case-by-case approach uses the same avenues but focuses on one division or department at a time. After a successful course, the value of training will spread by word of mouth.

There is no one best method that fits all situations. The key is to know your organization, its goals, objectives, and priorities:

- What is the attitude of upper management and different line managers toward training?
- Is it seen as a magic cure-all or as rarely necessary?
- What unique situations (new training needs, performance problems, etc.) provide opportunities for introducing a train the trainers course?
- What is an appropriate schedule given limited availability? A half day per week? Once a week?

If your course is to be successful, you must ask and answer these and similiar questions. The final point that bears repeating is that management support is essential to introducing any new training effort. Because all too many trainers have neglected this aspect, some courses have been poorly attended.

DEFINING YOUR AUDIENCE

Defining your audience is the first step in preparing, designing, conducting, and evaluating your class. It doesn't make any difference whether you are being videotaped for later viewing or conducting your class "live," whether you are conducting a theory course on hydrodynamics to postdoctoral scientists or training someone to be more effective on the telephone. It is still essential to define your audience. A class is a contract between you and your trainees to increase their knowledge or skills so they can be more effective on the job. Therefore, if your message is to have the maximum impact on the trainees, you need to identify what their needs are and why they are in the class.

The penalties for not defining your audience are many: If your presentation is too sophisticated or too complex, the learners will be bored, intimidated, or unable to learn. If your presentation is too elementary, the learners will be bored, feel put down, or have too little to learn. If you address the wrong topic, your learners will wonder why they are in this class. However, the rewards for being on target with your presentation are also many: The learners will be interested; they will develop new skills and knowledge; and you will be regarded as competent, knowledgeable, and certainly worth listening to. The focus of successful training is learner-oriented to maximize the transferral of your skills and knowledge to others.

How do you define your audience? Included for your use is a handout on questions to ask yourself before you design the class. The questions are divided into two areas: "Analyze Need: Who" and "Analyze Need: Why?" The "Who?" questions focus on the number and mix of participants, their knowledge and skill level, their familiarity with each other, and their attitudes about being in the class. The "Why?" questions focus on expectations (yours, theirs, their supervisors', and the organization's), how they will use the information, and their attitudes toward the topic. The "Questions for the Trainer" focus on you.

ANALYZE NEED: WHO?

How many trainees will there be? It is essential to know the number of participants in your class in order to plan your room size, the quantity of materials and equipment that will be needed, and the kinds of training methods you will want to use. If you plan on demonstrating the uses of various safety devices to a group of 10, but 60 people show up, it could prove difficult for the people in the back of the room to hear or see what you're doing. Or you might not have enough equipment for them to practice on. Also, you need to select the room size to suit the number of participants. In too large a room, your learners will feel dwarfed and perhaps wonder why more people aren't attending the class.

What is the mix of the trainees? How long have they been in the organization? What program (division or department) are they from?

Knowing the mix of the participants will give you information about the range of experience of the trainees and offer clues about their particular orientation to the topic. If you have all mechanics in the class, you might use different examples than if you have a mixture of mechanics and word processors. For example, an all mechanics class might relate better to examples about repairing a machine than the word processors might. If you have participants with disabilities or handicaps, you might need to make special arrangements for them and you might need to provide materials or equipment they can easily use. If you have classified learners mixed with nonclassified, the content of your presentation will have to meet the security constraints of the nonclassified individuals.

It is important to know the specifics about the audience you will be facing. How many, what mix, length of employment, level of expertise are some of the essential questions to be answered.

Knowing how long they've been in your organization and the departments they are from will give you clues about particular kinds of information they need to have. If you're conducting a course on interviewing skills for new employees, you might want to include more information on the organization. You will also want to include more information on how to interview electronic engineers if that's the group of people they will be interviewing. The more focused you can make your presentation and your examples, the more likely you are to meet the overall needs of your trainers.

What is their knowledge and skill level? This information will help you plan how sophisticated, or how elementary, to make your presentation. It will also guide the kinds of resources and the length of time you will want to spend on a subtopic.

How do they learn best? It is said that scientists love theory, engineers relate well to numbers and structure, and technicians prefer hands-on activities. Although these are stereotypes, occasionally there is validity to them. Many people prefer to learn the message through visual media (flipcharts, viewgraphs, films), others prefer to hear the message (lectures, audiotapes), while still others prefer to learn by doing (demonstrations, practice on equipment). Determining these preferred learning modes ahead of time will ensure that you have the kinds of materials that will maximize the learning.

How familiar are they with each other? The first thing participants want to know is who is in the class with them. If they don't know each other, then you will need to have them introduce themselves at least by name and department or more fully in an icebreaker exercise. If they know each other very well, but you don't know them, then you as an "outsider" will need to establish rapport with them. If you can identify the friends or foes in the class, then you can adjust your presentation to deal with them on a friendly basis or plan on how you will deal with antagonism or possible conflict.

What is their attitude about the topic? The answers to these questions will clarify how you need to work with your trainees. If they have come voluntarily and are eager to learn, then you will have an ideal environment for instruction. Involuntary learners are not necessarily hostile. Sometimes they aren't clear about why they are in this class or what is expected of them. As an instructor, you will need to give clear statements about the purpose and contents of the class and have them identify their expectations. If you suspect negative feelings, you don't have an impossible situation on your hands. However, you will need to spend extra time on the course purpose, structure, and expectations, both theirs and yours. Negative attitudes can be softened by encouraging learners to participate more actively in the training. Are there issues, words, or jargon that will offend or distract? You can't always avoid using words that will distract people, but you can be sensitive about using ones that might distress your particular group of learners.

ANALYZE NEED: "WHY?"

Training is made easier if the expectations of the participants, instructors, supervisors, and organization are clear from the beginning of a training session.

What are the expectations? You need to the expectations of the trainees, their supervisors, and the organization. It is not uncommon for participants to want to know how something works while supervisors want them to know why, and the organization wants them to know how this information will relate to other tasks that they need to perform. If you understand which is the controlling influence and what the level of ability and knowledge of the trainees is, then you can blend these expectations into a presentation that meets several needs. If you can have the participants identify their expectations at the beginning of a course, then tell them which ones will be met during the course and which ones will have to be met by other means, you are more apt to meet the needs of the group.

What are your expectations? As an instructor, you bring a wealth of knowledge and skills to the class as well as your own interests. When they match the needs and expectations of the group, your class will be more successful. In one class the instructor was giving instructions on the operation of several kinds of audio-visual equipment. He spent considerable time telling the class about ohms and voltages when all they wanted to know was how to rewind the projector. Both the instructor and the participants were very frustrated.

Does the course description define the course content? A well-written course description that people have read will eliminate many distracting and confusing expectations on the part of the trainees, their supervisors, and you. It will define the parameters of the topic and how it will be addressed.

How will they use the information? Will they be expected to apply the information tomorrow or is it background information for later use? If the desired result is for understanding the concept of an idea, then you will need to focus your course to meet that need. If the desired result is behavioral change, then you will want to plan for more practice and less theory.

What is their attitude toward the topic? In a class on performance appraisals, the trainees might need to know that this is a requirement of their job, like it or not.

Controversial issues? If you know ahead of time that a particular topic is highly controversial, you can choose to defuse it, sidestep it, or spend time discussing it. If you are unaware of the controversy, then occasionally participants will not listen or spend most of the class time arguing with you or each other.

QUESTIONS FOR THE TRAINER

The occasional trainer must be aware of the biases, expectations, and motivations brought to the training session in order to increase the effectiveness of the training itself.

In addition to the questions you need to be asking about the participants and why they're taking the class, there are three questions you need to ask yourself.

What are my biases? As human beings, we have opinions about what happens in the world. As instructors, we have opinions and biases about what is important about a particular topic and how others should feel about it. Knowing those biases will help you understand the thrust of your class and help you bridge any differences that might arise in the class itself.

What will I learn from this class? It is an old saying that instructors teach what they love or teach what they need to learn. As instructors, we are also learners; and to the extent that you can learn from your trainees and from the content, the more lively the topic will be for you and the participants.

Why do I want to do this? For some trainers, the opportunity to be the resident expert is a motivation. For others, it is increased recognition by their peers or their supervisors. Perhaps it is a real love of guiding people into new areas of knowledge. Rarely do occasional trainers get an increase in pay. Assessing your own motivations can help you increase the effectiveness of your class.

SUMMARY

The intent of all these questions is not to intimidate you but rather to ensure the success of the training for you and the participants. Many of these questions can be intuitively answered; others might take more formal assessing. How do you find the answers to help you define your audience?

You can get the information in several ways:

Survey the participants before they come to class. You can use a formal survey that asks them to rank their skill and knowledge abilities, or you can informally ask a random sample of participants about their skill and knowledge levels and expectations. These techniques are useful whether you have a heterogeneous class (a class that crosses job classifications and departments) or a homogeneous one.

Survey the participants' supervisors before class begins. If the class is custom-designed for a particular job classification or a particular department, it is very useful to sit down with the authorizing department head to determine the expected outcomes.

Do some analyzing on your own. Reflect on your guesses of who will be attending and why they will be there. Use your own past experience in learning the topic to analyze how you learned and whether you think that the participants will learn in the same way or differently.

> The most important thing to know is your audience: who they are and why they are coming to class. When you know both of these you are more likely to have a class that meets your expectations and the needs of participants and the supervisors alike. It will also be an enjoyable experience.

DEFINING YOUR AUDIENCE
Course Guide

PURPOSE

Some thought and preparation need to be given to who the trainees are and why they are taking the class. After participant needs are assessed, you can design the class to maximize the learning skills, knowledge, and attitudes.

MODULE OBJECTIVE

(As stated to trainees.) Upon completion of the module, you will be able to (1) define who your class participants are and (2) define why they are taking the class.

TIME

One hour

WHO

All occasional trainers responsible for developing or delivering presentations.

TEXT AND REFERENCE MATERIAL

Instructor's Guide

Handout (optional)

Cooper, Cary L., and Kenneth Harrison. "Designing and Facilitating Experimental Group Activities: Variables and Issues," in the *1976 Annual Handbook for Group Facilitators*. San Diego: University Associates, 1976.

Cooper, Susan, and Cathy Heenan. *Preparing, Designing, Leading Workshops. Boston: CBI Publishing Co., 1980.*

EQUIPMENT AND SUPPLIES

Classroom

Easel

Flipcharts

Pens

Writing paper

TRAINING METHODS

Lecture

Brainstorming

Individual exercise

Guided discussion

DETAILED OUTLINE

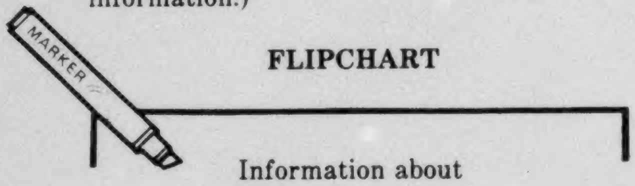
A. **Introduction To Defining Your Audience—Lecture** (10 minutes). (See Instructor's Guide for background information.)

Key points:

1. Before you design the training session you need to define your audience.
2. In order to meet the training needs of your participants (and of their supervisors and the organization), you need to know two things: who your participants are and why they're in your class.
3. If you design or conduct your class without defining your audience, you take a chance on giving the wrong information and skills, of being perceived as wasting their time, or of being perceived as an incompetent instructor.
4. Activity: Ask participants to brainstorm the reasons for analyzing their audience beforehand, and risks of not doing it.
5. The information on your audience can be gathered in several ways:
   - Survey the participants before they come to class.
   - Survey their supervisors before class begins.
   - Ask the participants at the beginning of class (e.g., ask the participants to state their expectations of what they will learn, then meet those expectations or say why you can't).
   - Do some analyzing on your own.
   - Any combination of the above.

B. **Group Exercise** (5 minutes)

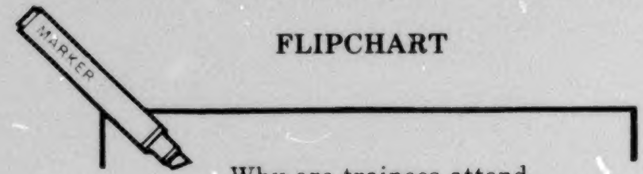
Ask people to think of a particular class they are going to teach. Then have them focus momentarily on the general content area they will present. Now ask them to focus in on the participants. Ask the group what kinds of information would be useful to know about the participants. Brainstorm and list the points on a flipchart. Add a few of your own to make the list as complete as possible. (See Instructor's Guide and Handout for background information.)



FLIPCHART	**COMMENTS**
Information about Trainees	Remind trainees that information gained is to help the trainer to zero in on what the trainees already know and what they need to know.

C. **Group Exercise** (10 minutes)

Ask the group to focus once more on the participants, but this time ask "Why are they in your class? What are their expectations? Their supervisor's expectations?" Brainstorm and list the points on a flipchart. Add a few of your own to make the list as complete as possible. (See Instructor's Guide and Handout for background information.)



FLIPCHART	COMMENTS
Why are trainees attending training?	Trainees attend training for many reasons. What attitudes are they bringing to the session?

D. **Individual Activity** (10 minutes)

Each person will now answer as many questions as possible about their participants. Using the questions on the flipcharts, ask each trainee to write out their answers. If a question isn't relevant or if the answer is unknown, make a note beside the question.

E. **In Trios** (10 minutes)

Divide the class into groups of three. In turn ask each occasional trainer to describe his or her participants according to who they are and why they're in the class. Use each other as resources for additional information.

F. **Group Activity** (10 minutes)

Ask the group what they've learned from this exercise and how it might be useful to them in designing their class.

G. **Closing** (5 minutes)

1. After you've defined your audience, at least roughly, you're ready to work on Instructional Objectives.
2. As you gather more information about the participants, you will need to alter the design or alter the way you handle the group.

H. **Optional Design**

Instead of brainstorming the two lists, give the class Handout No. 1, listing all the possible questions to be asked. Ask the participants to answer the questions.

ANALYZING TRAINING NEEDS

Analyze Need: "Who?"

- How many trainees will there be?
- What is the mix of trainees?
  - men-women?
  - classifications?
  - age range?
  - race?
  - supervisors-nonsupervisors?
  - homogeneous-heterogeneous?
  - classified-nonclassified?
  - disabilities or handicapped?
  - What is their level of responsibility in the organization?
  - What program (division or department) are they from?
  - Does the course description define the participants?
- What is their knowledge and skill level?
  - How does this group of participants learn best?
  - What do they already know about the topic?
  - What is their skill level in this topic area?
  - What can they handle in terms of experiential training?
- How familiar are they with each other?
  - Do they know each other?
  - Do I know any of them?
  - Are there friends or foes in the audience?
- What is their attitude?
  - What are their attitudes toward the topic?
  - Were they sent or did they come voluntarily?
  - Are they hostile? friendly? indifferent?
  - Are they willing to learn? Are they daring you to try to instruct them?
  - Are there words or jargon that will offend or distract?
  - Are there issues that will push their buttons?
  - Are they interested?
  - Are they intimidated or fearful of the topic?

Analyze Need: "Why?"

- What are the expectations?
  - What are the job/performance expectations?
  - What are the gaps between reality and expectations (i.e., what they will learn in the course versus what they want to learn)?
  - What are your expectations? Theirs? Their supervisors? The organization's?
  - Who put me up to this? What do they want the trainees to learn?
  - Is it a requirement that they know this information?
  - What does this group need?

INSTRUCTIONAL OBJECTIVES

Many instructors have a tendency to focus on the material being presented rather than on what their learners actually need to know. These instructors ask themselves, "Did I cover all the material I wanted to cover?" rather than asking "What did the trainees actually learn?" Before asking this question, you as a trainer should first determine what the learners actually need to know in order to perform their jobs more effectively. You should define the essential learning for improved job performance before designing a presentation or course. This establishes a destination and provides direction for planning instructional activities. Without this destination (instructional objective), you and your learners will not know exactly where you are headed and will probably end up somewhere else. Only after this destination has been identified can a route be selected and followed to take you where you want to go.

An instructional objective is a statement describing one of the intended results of the training. Instructional objectives are *learner-oriented* in that they describe what the learner will know or be able to do after the training. Instructional objectives also specify how the learning will be measured and the conditions under which the learning will be demonstrated. They do not describe what the instructor does or what the course will cover.

WHY USE INSTRUCTIONAL OBJECTIVES?

Instructional objectives clearly define what is to be conveyed by the trainer. They also take the mystery out of training for the learner by specifying the end results. Instructional objectives enhance training in three important ways:

1. They establish clearly defined goals by pinpointing a training need and the specific skills and knowledge required for the job performance.
2. They involve learners by telling them exactly where they are going and what is expected.
3. They give the instructor clearly defined goals for planning the training. These goals provide direction for selecting training material, how it will be presented, and how trainees will be evaluated. No trainer should be without such explicit directions.

Instructors who are subject-oriented rather than learner-oriented will set objectives according to the material covered. The concern here is with the material, not with the trainees. If the training is to be learner-oriented, it must be based on learner-oriented objectives, which answer these two questions:

1. What do the learners need to learn?
2. How will they and the instructor know when they have learned it?

Objectives oriented toward the learner transform training needs into specific learning targets for both the instructor and the trainees; define the beginning, the end, and a lot of what goes on during training; and make the learners feel involved and accountable.

Instructional objectives transform training from a difficult and confusing job to an efficient and satisfying experience.

Can you instruct without using instructional objectives? Of course you can. Most of the training you have received has probably been conducted without them. Why are they so important? Because their use can transform training from the difficult and confusing job it often is to a more orderly, efficient, and satisfying experience.

WHAT ARE INSTRUCTIONAL OBJECTIVES

Much has been written in recent years about instructional objectives. The most widely recognized expert in this area is Robert Mager, whose book *Preparing Instructional Objectives* is an excellent resource that has been used by trainers and educators alike.

Two of the basic concepts popularized by Mager are used in this manual:

1. Training is most effective when it is learner-oriented.
2. The end result of training should be a change in the behavior of the trainee.

For our purposes, then, an instructional objective describes the learning in terms of what the trainee will be able to do as a result of the training. An instructional objective does not mention the instructor, the methods used, or training subjects covered.

Prerequisites for Writing Instructional Objectives

Instructional objectives may be written by the instructor, the course developer, or others. Before anyone writes objectives, however, he or she needs certain information. The first step is to determine that training is needed. This may be done through identification of job deficiencies, of the need to increase productivity, or of a requirement by the company, DOE, or other federal and state regulations. Sometimes a needs analysis will be conducted to examine actual job performance against ideal job performance. This identifies the training need and the desired on-the-job performance, and breaks the major components of training into specific subjects.

A needs analysis provides the broad goals of the job and the type of training needed. This information is too general, however, to supply specific answers regarding what the learners must be able to do. These answers come by extending the needs analysis further in a process called task analysis.

Task analysis breaks a job function down into specific tasks and subtasks. Each task is then analyzed according to the skills, knowledge, and attitudes necessary for its successful performance. With this information, it is relatively easy to write instructional objectives by plugging the required competencies into the formula described below.

CHARACTERISTICS OF AN INSTRUCTIONAL OBJECTIVE

What are instructional objectives? What do they look like? How do I write objectives? These questions can be answered by repeating earlier statements.

- Instructional objectives state what the learners need to know and how they and the instructor will know when they they have learned it.
- Instructional objectives describe what the learner will be able to do as a result of the training.

Simply stated, instructional objectives are learning goals expressed in terms of measurable trainee performance. This brief definition can be most accurately understood by breaking objectives down into three characteristics:

1. *Behavior*. What the trainee will do to demonstrate what has been learned.
2. *Condition*. The aiding or limiting stipulations under which a behavior will be performed.
3. *Standards*. The specific criteria (accuracy, quality, and/or time) which are used to measure trainee performance.

Behavior Characteristic

The behavior characteristic identifies what actions the learner will perform to demonstrate what has been learned. This may include application of knowledge, performance of skill, or demonstration of an attitude. This portion of the objective always specifies action or performance. The significant parts of the behavior statement are the subject, which is always the learner, a performance-oriented verb, and the object.

Examples:

The trainee will be able to thread 3/4-inch pipe.
The trainee will be able to repair a pump.
The trainee will be able to list and describe the six steps in the new inventory control procedure.

Shown below are examples of two types of verb phrases frequently used in writing objectives. The doing verbs require learners to demonstrate performance and should be used when writing instructional objectives. The being verbs are too vague or imprecise to be useful in performance-oriented training.

The following are not performance-oriented verbs:

To know
To be familiar with
To have a working knowledge
To understand

To become an expert
To become well versed in
To gain proficiency in
To acquire skill

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The following are performance-oriented verbs:

To choose
To state
To identify
To solve
To list
To weld
To install
To operate

Condition Characteristic

The condition characteristic defines the aiding or limiting stipulations under which the behavior is to be performed. A limiting condition identifies the restrictions placed on desired performance. Limiting conditions are shown by the capital letters at the end of the following directions:

- Repair the pump while STANDING IN THREE FEET OF WATER.
- Describe the appropriate response to a fire alarm FROM MEMORY.

An aiding condition stipulates any help or assistance permitted during demonstration of the behavior. Examples of aiding conditions are shown by the capital letters in each of the directions below:

- Repair a microprocessor USING THE TECHNICAL MANUAL.
- Demonstrate the proper suiting up procedures GIVEN THE FOLLOWING DIAGRAMS.

Condition statements are necessary to simulate the circumstances under which the behavior must be performed on the job. An overall goal is to develop knowledge, skills, and attitudes that will be transferred from the classroom to on-the-job settings. This is most effectively done if trainees must demonstrate performance under the conditions they will face on the job.

Standards Characteristic

The standards characteristic specifies the criteria which the demonstrated performance must meet. Standards are normally expressed in terms of time, accuracy, or quality. These are examples of accuracy standards:

- Accuracy must be within the tolerance of .001 of an inch.
- Measurement must be within 98% accuracy.
- Error of accuracy must be no greater than one foot.

These are examples of quality standards:

- Soldered joint must have a resistance of no greater than 1 ohm.
- The welded pipe must withstand a test pressure of 2000 lbs.
- Documents must be typed according to the company-approved style guide.

These are examples of time standards:

- Work to be completed within one training session.
- Desk audit to be completed within 20 minute period.
- Installation to be completed within 3 hours.

In summary, clear, concise, and accurate instructional objectives contain three elements or characteristics. They can be most easily remembered by following this simple formula:

Instructional Objective = Behavior + Conditions + Standards

TERMINAL AND ENABLING OBJECTIVES

When writing instructional objectives, be sure the objective is attainable in a short period of time. If it is not, use enbling objectives.

A realistic objective is one that can be achieved. An objective that is unattainable in a relatively short period of time creates serious problems and should be avoided. If the objective is perceived to be immediately unattainable, then it should be stated in stages approaching the ultimate or terminal objective. Breaking terminal objectives down into subobjectives or enabling objectives reduces frustration and increases the chances of success.

Example:

> In learning to drive a car, trainees must turn the ignition key, adjust the mirror, make sure traffic is clear, select the proper gear, and accelerate.

Each stage must be met before we can accomplish the terminal objective of driving. For those not familiar with how to drive, certain lower order skills or knowledge are required before the terminal objective can be met. In driver training, each of these lower order skills or knowledge is defined as an enabling objective.

TYPES OF INSTRUCTIONAL OBJECTIVES

Knowledge
Skill
Attitude

The end result of training should be to change the behavior of trainees back on the job. Depending upon the type of behavior change desired, learning is needed in one or more of the following areas—knowledge, skills, and attitudes. Accordingly, instructional objectives are classified as knowledge, skill, or attitude objectives depending on the desired behavior change.

Knowledge objectives require the trainee to demonstrate proficiency in acquired knowledge. There are two kinds of knowledge objectives:

1. Those requiring an understanding of principles or concepts.
2. Those requiring retention of facts.

Conceptual knowledge is applied to behavior in such ways as being able to explain the rationale for a particular safety requirement or being able to compare the advantages and disadvantages of several methods of inventory control. Factual knowledge or understanding requires retention of information that may be applied on the job in a variety of ways such as defining the six steps in the emergency evacuation procedure or naming the eight major user groups served by the maintenance department.

Skill objectives can be broken down into mental and physical skills. Mental skill objectives involve the application of knowledge to decision making. Mental skill tasks may include performing pencil and paper exercises related to a manual skill, solving mathematical problems, reaching management or tactical decisions, interpreting data, analyzing information, completing forms or reports, writing computer programs, etc.

Physical skill objectives involve the application of manual procedures. Physical skills are the most directly observable behaviors and the easiest to measure. Examples of physical skill objectives are reassembling a safety valve, repairing a transformer, and taking a dosimeter reading of a given source.

Attitude objectives focus on trainee confidence, motivation, human relations, and recognition of the importance of complying with policies and procedures such as safety guidelines. Attitudes are difficult to assess since written tests and simulations may not reveal trainee attitudes as they come into play on the job. Observance of attitudes on the job is generally not practical in most training situations. These difficulties, however, should not stop us from trying to measure attitude.

Attitude objectives should be written in terms of recognizable and measurable behavior that is descriptive of the desired attitude. Write attitude objectives using the same general rules that apply to knowledge objectives. Action verbs commonly used in writing attitude objectives are *explain*, *describe*, and *demonstrate*. Simulations and role-playing are frequently used to evaluate performance that reveals an understanding of attitudes. Demonstrating the proper safety precautions while troubleshooting an electrical breaker is an example of an attitude objective.

SUMMARY

Why use instructional objectives? Because they transform training needs into learning targets for both the instructor and the trainees. They help trainees know exactly what is expected of them and help them feel involved. Without instructional objectives the trainer and the learners do not know exactly where they are going and very likely will end up some place else. Conducting training without instructional objectives is like playing football without keeping score. You may have a lot of fun but after the game is over, participants cannot agree on the final outcome.

Keep your instructional objectives learner-oriented; focus on what the learner needs to know in order to do a better job.

What are instructional objectives? They are statements describing the intended results of the training. They describe what the learner must know or be able to do as a result of the training and how this will be measured. They answer the following questions:

1. What do the learners need to learn?
2. How will they and the instructor know when they have learned it?

What are the elements or characteristics of an instructional objective? Instructional or learning objectives define specific behaviors or action to be taken, the conditions under which performance will be demonstrated, and how performance will be measured.

Instructional Objectives = Behavior + Condition + Standards

What are the three types of instructional objectives? Instructional objectives may be classified as (1) knowledge objectives, which require trainees to demonstrate proficiency in acquired concepts or facts; (2) skill objectives, which require proficiency in mental processes or physical procedures; and (3) attitude objectives, which are directed at learner motivation, confidence, values, and human relations. When objectives are difficult to measure directly, one must relate them to a revealing behavior that demonstrates understanding.

INSTRUCTIONAL OBJECTIVES
Course Guide

PURPOSE

There is a natural tendency in planning a training session to take the training subject and break it down into all the bits of knowledge, skills, and attitudes that might be relevant. A comprehensive course on each subject is rarely needed. Training is much more effective when the essential learning is defined up front and instructional activities are developed to achieve this essential learning. Instructional objectives provide the intended results of training through answering two basic questions: What do my trainees need to learn? And how will they and I know when they have learned it?

MODULE OBJECTIVE

(As stated to trainees.) Upon completion of the module, you will be able to (1) take a training need or requirement and define realistic instructional objectives, (2) define the three elements in an objective, and (3) define and write examples of the three types of objectives.

TIME

Two hours

WHO

All occasional trainers responsible for developing or delivering presentations.

TEXT AND REFERENCE MATERIAL

Instructor's Guide

Handout

Robert F. Mager. *Preparing Instructional Objectives*. Belmont, California: Pitman Learning, Inc., 1975.

EQUIPMENT AND SUPPLIES

Classroom

Chalkboard

Flipcharts

Pens

TRAINING METHODS

Lecture

Guided discussion

Demonstration

Simulation

DETAILED OUTLINE

A. **Introduction to Instructional Objectives—Illustrated Lecture** (20 minutes) (See Instructor's Guide for background information.)

Key points:

1. Discuss tendency to jump from training need to identifying all information related to the subject. Example: If trainees need to learn how to fix a valve, do we offer a course in thermodynamics?
2. Instead of throwing all this material at learners, determine essential knowledge, skills, and attitudes and organize activities accordingly.
3. Discuss characteristics of instructional objectives.

FLIPCHART

Instructional Objectives Answer These Questions:

1. What do my learners need to learn?
2. How will they and I know when they have learned it?

COMMENTS

Instructional or learning objectives are statements describing what trainees will able to do as a result of the training and expressed in terms of *measurable* performance.

Identification of a training need is a starting point but is too general to specifically answer these questions. A training need must be broken down into the required tasks or activities and the skills, knowledge, or attitudes needed to perform these tasks.

FLIPCHART	COMMENTS
Characteristics of Instructional Objectives	
1. Behavior	Behavior or action to be taken: "The trainee completes the July inventory report."
2. Conditions	Conditions: "Given the necessary forms and inflow /outflow information."
3. Measurable Standards	Measurable standards:"In three hours with 95 percent accuracy."

Instructional Objectives = Behavior + Condition + Standard

B. **Group Exercise** (10 minutes)

Ask trainees for examples of specific tasks related to training needs in the workplace and write possible objectives on flipchart or chalkboard. Discuss/critique each with input from trainees.

C. **Subgroup Exercise** (30 minutes)

1. Divide class into groups of three (distribute flipcharts).
2. Each participant or trainee will write an instructional objective for typical tasks they might teach.
3. Participants will individually present their objectives (on flipcharts) to the other two group members.
4. Other group members will critique for the three characteristics.
5. Participants rewrite if needed.
6. Instructor circulates among subgroups to provide assistance where needed.
7. Ask each participant to describe training task and present objective to whole group.
8. Be prepared to ask questions to clarify the objectives. Avoid judging results until all presentations are complete.
9. Comment on objectives as appropriate.

D. **Types of Instructional Objectives—Illustrated Lecture** (15 minutes)

Instructional objectives may be classified in three categories depending on what the trainee is expected to learn.

FLIPCHART	COMMENTS
Types of Instructional Objectives	
1. Knowledge Objectives Concepts Facts	Knowledge objectives require trainees to demonstrate proficiency in acquired knowledge. Conceptual understanding: Explain terms Compare items Identify widgets Factual understanding: List components Recite steps Define conditions
2. Skill Objectives Mental Physical	Skill objectives require proficiency in mental processes and physical procedures. Mental processes: Complete reports Solve problems Make decisions Physical procedures: Wire transformer Build wall Mix chemicals
3. Attitude Objectives	Attitude objectives are directed at learner motivation, values, self-confidence and human relations. They are difficult to measure directly so one must usually relate the desired attitude to a behavior: Concern for safety Sensitivity to feelings Appreciation for importance of rules

E. Group Exercise (10 minutes)

Ask trainees for examples of specific situations in the workplace where training may be needed and write knowledge, skill, and attitude objectives for each situation. Discuss each with learners.

F. Subgroup Exercise (35 minutes)

Repeat subgroup exercise in C above in same trios with each participant writing realistic examples of the three types of objectives.

INSTRUCTIONAL OBJECTIVES

Instructional objectives are statements describing what trainees will be able to do as a result of the training expressed in terms of measurable performance. They describe trainee (not instructor) behavior or performance. They do not simply describe what the trainee is expected to know or understand.

CHARACTERISTICS OF INSTRUCTIONAL OBJECTIVES

Instructional objectives have three characteristics: behavior, condition, and measurable standards; for example,

Behavior: when the trainee completes this lesson, he will be able to add a column of 10 four-digit numbers.

Condition: . . . given a paper and pencil . . .

Standards: . . . in 2 minutes without error.

Instructional Objectives = Behavior + Condition + Standard

I. Behavior Characteristic

A. Identifies what the trainee will do to demonstrate what has been learned as to:

Knowledge applied
Skill accomplished
Attitude demonstrated

B. Has three significant parts:

1. Subject—always the trainee
2. Verb—specific action to demonstrate achievement, e.g., adjust, repair, modify, select, complete, organize, classify, etc.
3. Object—word or phrase describing what is acted upon, e.g., valve, form, document, respirator, life jacket, etc.

II. Condition Characteristics

Defines the limiting or aiding condition under which the behavior will be performed.

A. Limiting conditions stipulate the restrictions or limits placed on trainee performance, e.g., "list from memory."

B. Aiding conditions stipulate the aid or assistance permitted for trainee performance, e.g., "repair using the technical manual."

III. Standard Characteristic

Specifies the criteria which the performance must meet expressed in terms of

A. Time,

B. Accuracy,

C. Quality,

D. Or a combination of the above.

TRAINING PLAN

We hope by now that you as a trainer have become convinced of the need to write instructional objectives. Once the instructional objectives have been developed, your effectiveness as a trainer will be greatly increased if you take the time to write a training plan to show how the chosen objectives will be achieved. A training plan is not a script. It is more a map indicating the route to follow in order to bring about the desired learning.

> A training plan or guide is an outline of what is to occur during a training session. It is written by the instructor. The training guide includes the instructional objectives, content, instructional methods, materials and equipment needed during a training session, trainee activities, and evaluation measures.

You are probably wondering how *you* will benefit from developing a training plan. After all, it will take time! Planning helps us to get organized, attain goals, and establish direction. This can be seen in our private lives, as well as in our work. Planning needs to be applied to training as well. The occasional trainer can only benefit from the small amount of time devoted to writing a training plan. Because time spent developing such a plan will increase the effectiveness of the course, it will not be time wasted.

A training plan sets goals for both the trainer and trainee, enabling the trainer to remain learner oriented.

The writing of a training plan will force you the trainer to sit down and prepare for the training session. This preparation will help overcome the anxiety you may feel about facing a group of trainees. The training plan is particularly useful for occasional trainers as it increases their confidence in their ability to be an effective instructor. The material to be presented will be organized in the proper series of learning activities, building toward the chosen instructional objectives.

WHERE TO BEGIN

It will be necessary to size up the group you will be facing before putting pencil to paper. First determine the present level of education and work experience of the group members. This may eliminate the need for some of the simpler aspects of your instruction. The easiest way to define your audience is to determine their job classification and level. This will provide a general idea as to work history and education. If you have more time for this activity, you may wish to collect information directly from the trainees, regarding their needs and competencies. For example:

SUPER
Designer

- Have the attendees complete some form of pre-attendance work, such as a questionnaire or self-rating checklist, indicating their needs.
- Use a pretest of the training materials to determine where the most help is needed.

These examples are simply suggestions. As a trainer, you are in the best position to determine the appropriate methods of assessing the background of the group receiving the instruction. Taking some time to think about this group will give you a head start in the preparation stage.

ORGANIZING AND PREPARING THE TRAINING PLAN

Now you are ready to tackle the specifics of the training plan. Trainers are usually chosen to conduct training because of their expertise in the material to be taught. This being true, you may not need to research the topic to be presented. It may be helpful to update yourself on any recent materials, and you should definitely review any materials that have been given to you to use during the training.

Next you will have to write your instructional objectives (see Chapter 3) and select the lesson content to support those objectives. Remember to give some thought to trainee needs, the available time, and schedules before writing a training plan.

Mindful of these considerations, let us get to the actual material needed to complete a training plan. Collectively this information will make for a well-prepared instructor. The trainer will be assured of having the needed materials and equipment for the lesson at hand. This aids in presenting the subject matter in a complete and logical order.

OBJECTIVES
EQUIPMENT
METHODS
CONTENT
EVALUATION

Examine the sample training plan on the next page. It is a blueprint to which the instructor can refer as the lesson progresses. It includes the information a well-prepared instructor would need to present an organized, coherent training session. Notice the following items and where they are located on the sample training plan:

Subject title and page
Training segments
Materials and equipment
Instructional objectives
Content
Methods/trainer activities
Trainee activities/evaluation
Time allotted for each segment to be taught

Now we will examine the layout of each item noted.

TRAINING PLAN
COURSE: PIPEFITTING
SUBJECT: HAND HACKSAWS

TRAINING SEGMENTS COVERED	MATERIALS AND EQUIPMENT
Replacing Blade Blade Selection Positioning and Angle Stroking	Flipcharts, Easels, and Marker Hacksaw Frames, 1 ea., inst. & trainees Blades 16 #1218, 6 #1224, 6 #1214, 6 #1232

INSTRUCTIONAL OBJECTIVES	CONTENT	METHODS/ TRAINER ACTIVITIES	TRAINER ACTIVITIES/ EVALUATION	TA
Be able to replace blades with teeth in right right direction under right tension.	Parts of hacksaw and functions	Issue hacksaws and 1 blade each.	Trainee replace blades, instructor checks each	10
	Replace blades 1. Teeth direction 2. Tension	Demonstrate with prepared filpchart		
Be able to pick right blade for three common jobs.	Types of blades Blade markings Application	Lecture with prepared flipcharts	Replace blades Performance test	10
		Test trainees with pile of blades and test sheets		
Must be able to make two correct cuts on my marks.	Positioning and angle 1. Starting cut on mark 2. Cutting 3. Vertical and horizontal	Lecture with prepared flipcharts	Trainees do two cuts with instructor checking	10
		Demonstrate Answer questions Demonstrate questions		30
	Stroking 1. Starting stroke 2. Cutting stroke 3. Cleaning stroke 4. Finishing stroke			

Subject Title and Page

Title and number each page to provide easy reference. This will avoid the embarrassing mistake of moving to the wrong page.

Training Segments

List the segments to be covered on each page of the training plan for quick reference. These are the broad areas to be covered without going into detail regarding how each will be taught.

Materials and Equipment

This is a quick checklist of what the instructor and trainees will need in each class area. Instruction will be smoother if it is not necessary to stop to find three pipe stands that were left back at the shop.

Instructional Objectives

Instructional objectives are learning goals stated in terms of measurable trainee performance.

The three objectives listed are the separate steps to be taken to meet part of the larger objective of "Given 2 pieces of new pipe marked for cutting and 2 marks on a piece of in-place pipe, and access to hand and power tools, the trainee will make the assigned cuts in such a manner that all safety practices are observed, all the cuts are suitable for mounting pipe dies, and all the cuts are on the mark."

The instructional objectives answer the question "What will be learned as a result of this segment of the training?" The trainer lists the separate instructional objectives (enabling objectives as covered in Chapter 3) to be covered and then fills in the content material which matches the chosen objectives.

For example, the first instructional objective is "Be able to replace blades with teeth in right direction, under right tension." To do this the trainees will have to learn the various parts of the hacksaw and what function each part serves. In this way the trainee will be able to loosen or tighten the correct wingnut so that the blade can be replaced and held at the correct level of tension. Instructional objectives keep the trainer focused on what the trainee needs to know. The area of content, training methods, and trainee activities/evaluation are organized around how to meet the chosen instructional objectives.

Content

Clearly this is only a broad outline that covers the main points of the material. If the material to be covered is familiar to the trainer, this outline and some detailed notes will provide the necessary information for conducting a training session.

As an instructor, you should know how to present the material in a way that is meaningful to the trainee rather than simply convenient for yourself. This is important because each training session's purpose is to encourage learning by the trainee. One helpful way to accomplish this is to arrange the training content in proper sequence.

Instructional sequencing is merely a flashy way of saying, "put first things first." As the instructor, you must use your own judgment to decide what the learners (trainees) should learn first, and next, and next, etc. Judgments should be based on the tasks workers perform in an actual work setting. Stay oriented to the learners' needs and few mistakes will be made.

Approach the instructional sequencing decisions by asking these questions:

- How will the learner use this?
- Does this emerge logically from something the learner already knows or can do?
- Does this prepare the learner for further learning?

These questions will maintain the focus on the trainee and keep the instructor away from doing what is easiest for him.

Sequence by beginning at the trainee's pretraining level, progressing toward the desired posttraining goal.

With these considerations in mind, outlining the content will be easier. Be sure to describe all the knowledge and skills involved in achieving the desired level of learning and performance. Sort out *only the material the trainee needs to know* in order to perform the training assigned. Identify the type of performance needed at each level of the learning. Keep in mind that learning is easiest when it progresses from simple bits and pieces to more complex combinations. Learning must begin at the trainees' pretraining level (of knowledge and skill), then progress up the various levels to the one that represents what the trainees should know or be able to do as a result of the training. Each segment of learning builds on the one presented before it. For example, a welding trainee will learn the parts of the welding equipment before instruction is given on how to complete a specific type of weld.

There are several approaches to instructional sequencing. Following a few general rules will be helpful:

1. Instruction should proceed from the general to the specific. This technique gives the trainee the big picture first, then fill in the details. For example, show trainees how to operate a machine before showing them how to repair it.
2. Teach those skills which are used most often first. Sequence the rest of the units in order of decreasing importance or usefulness. For example, teach locksmithing trainees how to make keys before teaching them how to change combinations.
3. Put high-interest materials at the beginning, which is an excellent way to maintain motivation. For example, trainees entering a

programming course might be interested in running a character graphic program, such as Snoopy. Demonstrate how to do this first, then begin instruction on how to program bar graphs. Intersperse high-interest segments throughout the training sessions to keep trainees motivated.

Three other strategies help in sequencing:

1. Move from the familiar to the unknown, to let old material serve as a basis for new material.
2. Move from the whole to the parts.
3. Move from the concrete to the abstract.

Methods/Trainer Activities

Remember to select the methods which best present the content material.

Having read Chapter 5 on training methods, the instructor will choose the methods that will best communicate the content and achieve the objectives. It is only necessary to write down the type of methods (lecture, demonstration, guided discussion, or practice) to be used on the training plan. An instructor will know what is to be stated in the lecture or demonstrated during the demonstration because this was covered in preparing the objectives and content. The instructor should vary the methods used for each part of the training. *Don't just lecture!* Present the content to the trainees in the most appropriate manner and maintain their interest.

Included in this section are the "housekeeping" activities, such as "issue hacksaws." Listing these activities affords the trainer the confidence of remembering just when the hacksaws are to be given out or when the test is to be distributed. Those awkward moments of shuffling papers are kept to a minimum if the trainer keeps track of the sequence of events.

Trainee Activities/Evaluation

As a trainer, you must keep track of what the trainees are to do and how well it is done or learned.

This section of the training plan describes what the trainees will do during each segment of the training session. In the sample plan, the trainees will replace the blades, take a written test, and make two cuts of pipe. In other training plans, activities could be viewing a film, participating in a group exercise, or completing a practical exercise. Keeping track of the trainees' activities simplifies the instructor's job of being learner-oriented. The trainees are to be the focus of the training. The instructor who catalogs the trainee activities will be assured of keeping the trainees' needs in mind.

Activities measuring trainee performance, such as observation, simulations, and tests, are also listed under this section. Evaluation of trainee learning is an ongoing process. It is the systematic process of assessing whether instructional objectives are being met. Remember that the purpose of evaluation is to measure what and how well the trainees learned. The written test is only one way to measure the attainment of the learning objectives; performance tests, oral questions, and observation of trainee work also serve the instructor well as measuring tools (see Chapter 7 on evaluation).

Time Allotted (TA)

The time allotted will simply keep the trainer aware of the amount of time being spent on each segment. It is not necessary to adhere rigidly to these times. If more or less time is needed, that is fine. These time allotments are handy when adjustments need to be made, as in carrying over into the next training session. When planning your lesson, inflate your time allotments by 10 percent to allow enough time for completion of the segment.

SUMMARY

Without question, a training plan is an outline of the instructing. If written correctly, it will also be an outline of the learning to be accomplished by the trainee. A training plan must reflect the level of importance of the learning to be achieved. It is the basic organizational unit and schedule of events for the training session.

A training plan will enable the trainer to organize and present the material with confidence. There is security in knowing that the information is in an organized, logical order, which meets the instructional objectives.

Every training plan should at least include the learning objectives, the content outline, the training methods to be used, and the trainee activities/evaluation. These items provide the blueprint or road map that a well-prepared instructor needs to conduct a training session. They should appear on the training plan in proper sequence and in a form most convenient for the instructor to use as a reference during the training session.

TRAINING PLAN
Course Guide

PURPOSE

An important aspect of any presentation is the preparation process. The organization of materials for a training presentation can be accomplished through the writing of a training plan. Having an overall plan gives the trainer a sense of direction for the training which is to take place.

MODULE OBJECTIVE

(As stated to the trainees.) Upon completion of the module, you will be able to (1) list the four areas that must be included in a training plan, (2) select training methods that support the chosen instructional objectives, and (3) design a training plan.

TIME

Two hours

WHO

All occasional trainers responsible for developing or delivering presentations.

TEXT AND REFERENCE MATERIAL

Instructor's Guide

Handouts

Designing and Packaging Training Programs by Consult, Ltd., can be borrowed from:

ETA Resource Clearinghouse
Room 8221
Patrick Henry Building
201 D Street, N.W.
Washington, D.C. 20213

EQUIPMENT AND SUPPLIES

Classroom

Chalkboard

Flipcharts

Pens

TRAINING METHODS

Lecture

Guided Discussion

Group Exercises

DETAILED OUTLINE

A. **Introduction to Writing a Training Plan—Illustrated Lecture** (10-15 minutes) (See Instructor's Guide for background information.)

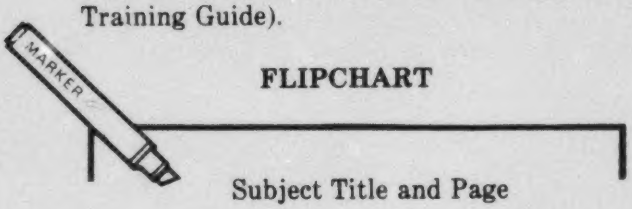
Key points:

1. Definition
    - An outline of what is to occur during the training session
    - A summary of the needed learning activities to be directed by the trainer
2. Plan includes instructional objectives, content, training methods/trainer activities, materials and equipment needed, and trainee activities/evaluation.
3. Benefits to occasional trainer:
    - Forces trainer to get organized and be prepared for the training session.
    - Overcomes anxiety.
    - Establishes direction.
    - Keeps trainer aware of trainee needs.

FLIPCHART	COMMENTS
Training Plan A Road Map	Written by the trainer
Plan Includes	Plan serves as an aid to the instructor and trainee
Benefits Derived	Keeps track of housekeeping and instructional items Increases trainer confidence Forces trainer to prepare and focus on trainee needs Outline of learning to be accomplished

B. Organizing and Preparing Training Plan—Illustrated Lecture (15 minutes) (See Instructor's Guide for background information.)

Discuss actual material needed to complete Training Plan (pass out Handout No. 1, Sample Training Guide).



FLIPCHART	COMMENTS
Subject Title and Page Training Segments Materials and Equipment	These are "housekeeping" items which help avoid becoming lost during a training session.
Instructional Objectives	Instructional objectives answer the questions "What will be learned as a result of this segment of the training?"
Content	Content is a broad outline of the main areas of the subject material. It is important to sequence the content material: "What the learners need to learn first, next and next."
Methods/Trainer Activities	Choose methods that will best communicate the content and achieve the objective. You need to present content in an appropriate manner and maintain interest. Trainer activities indicate when papers must be passed out, materials distributed, etc.
Trainee Activities and Evaluation	Trainee activities and evaluation indicate what the trainees will do or be responsible for during the training session. Evaluation is the attempt made by the trainer to measure the learning accomplished.

C. **Guided Discussion** (10 minutes)

Using the Guided Discussion method, have the group develop a training plan written on the chalkboard or flipcharts. Ask the trainees to volunteer a typical situation in which they as occasional trainers might be asked to instruct. Using their examples, write objectives, content, methods, and trainee activities, relying on the group to provide the information. You may need to rephrase their comments to fit the items in the plan. Tell the group that after several examples, you will ask each of them to write a training plan. Repeat the process several times until you are comfortable that the trainees understand each item.

D. **Subgroup Exercise** (90 minutes)

1. Divide class into three groups (distribute flipcharts).
2. Indicate that participants will have opportunity to design a training plan on a subject relating to training for which they might be responsible.
3. Indicate that, in their groups, trainees will:
    - Choose instructional objectives.
    - Design a one-hour training session to meet those objectives. The training plan should include all the areas listed earlier in class, in format of the trainees' choice.
    - Write out their training plan on newsprint to be presented to whole class.
4. Reconvene class. Each subgroup presents its training plan to the class. Encourage the whole group to ask clarifying questions about the designs, but not to criticize. As trainer, comment on positive elements of each plan.

Training Plan
Handout No. 1
page 1 of 1

TRAINING PLAN
COURSE: PIPEFITTING
SUBJECT: HAND HACKSAWS

TRAINING SEGMENTS COVERED	MATERIALS AND EQUIPMENT
Replacing Blade Blade Selection Positioning and Angle Stroking	Flipcharts, Easels, and Marker Hacksaw Frames, 1 ea., inst. & trainees Blades 16 #1218, 6 #1224, 6 #1214, 6 #1232

INSTRUCTIONAL OBJECTIVES	CONTENT	METHODS/ TRAINER ACTIVITIES	TRAINER ACTIVITIES/ EVALUATION	TA
Be able to replace blades with teeth in right right direction under right tension.	Parts of hacksaw and functions Replace blades 1. Teeth direction 2. Tension	Issue hacksaws and 1 blade each. Demonstrate with prepared filpchart	Trainee replace blades, instructor checks each	10
Be able to pick right blade for three common jobs.	Types of blades Blade markings Application	Lecture with prepared flipcharts Test trainees with pile of blades and test sheets	Replace blades Performance test	10
Must be able to make two correct cuts on my marks.	Positioning and angle 1. Starting cut on mark 2. Cutting 3. Vertical and horizontal Stroking 1. Starting stroke 2. Cutting stroke 3. Cleaning stroke 4. Finishing stroke	Lecture with prepared flipcharts Demonstrate Answer questions Demonstrate questions	Trainees do two cuts with instructor checking	10 30

TRAINING METHODS

The objectives and the subject matter have been organized. Now the trainer needs to select the most appropriate training (instructional) methods to present the subject matter and accomplish those objectives.

Training methods are the approaches, strategies, and procedures that involve the trainer and the trainees in the learning process. Training will be more effective if the trainer is careful to vary the methods used during the training sessions. In selecting methods, the trainer should choose the instructional methods most appropriate to the type of objectives (knowledge, skill, or attitude) to be accomplished.

The instructor should choose methods of instruction in terms of the trainees' activities as learners. To choose appropriate methods, the instructor must keep in mind the ways in which adults learn:

- By doing
- By discussing
- By listening
- By observing
- By participating

The instructor's job is to select an organized set of activities that will result in meaningful learning experiences for the trainees.

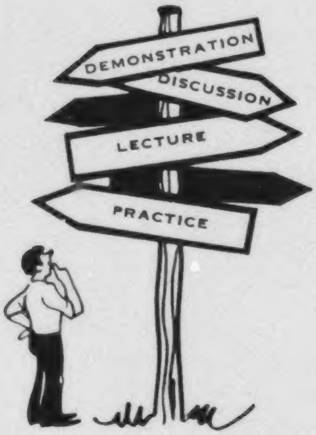
Please note that seldom are all needed learner experiences provided by one instructional method. Nor is one particular instructional method suitable in all training situations. If, for example, trainees are to attain competence in performing a certain skill, one of their activities should be to practice that skill. If knowledge is the objective, then trainees should observe, listen, and be required to apply the information presented. This way they can relate what they have seen or heard to their own experiences. If the knowledge involves learning a principle, offer an activity that requires solving a problem or applying the principle.

No one particular training method is usable in all training situations.

Several different methods of instruction should be used in a single training session. Each method chosen should meet the needs of each segment of the required learning, as indicated by the instructional objectives. Combinations of instructional methods provide variety for the trainees, which helps to hold their attention and maintain their interest.

Many trainers have learned that videotaping presentations made by themselves and their trainees is a very effective means of increasing learning. The advantages of videotape tape are that it allows us to see ourselves as others see us and also provides a means of studying our own behavior. This can be very useful in perfecting presentation style, eliminating distracting mannerisms, or learning physical and motor skills.

There are many popular training methods. This chapter will deal with the four most widely used methods: lecture, guided discussion, demonstration, and practice. Each method is described below, with particular attention paid to when and how it should be used. The discussions are short, but of enough detail to enable you to choose the methods that match your instructional objectives and the material to be presented.



LECTURE

The lecture method usually refers to a formal or informal presentation of information, concepts, or principles by a single individual, the trainer. This is the traditional classroom mode of instruction.

A lecture can be formal or informal:

1. The *formal* lecture is usually given to large groups with no active participation by the trainee. This makes the learning experience a passive one. It also makes it inappropriate for skill training.
2. The *informal* lecture is appropriate for a smaller group. The informal lecture encourages active trainee participation through the exchange of comments, questions, and answers by the trainer and trainees.

Although the lecture method is passive in that trainees are not actively involved, it has several advantages:

Lecture is a convenient method for instructing large groups, presenting many ideas, and introducing or summarizing a subject. It is not a good way to teach skills.

1. It permits the presentation of many ideas in a short time. Material that has been logically organized can be presented concisely and rapidly.
2. The lecture is particularly suitable for introducing a subject or presenting basic information. It ensures that all trainees have the necessary background to learn the subject material.
3. It is a convenient method for instructing large groups. If necessary, a public address system can be used to ensure that all trainees can hear.
4. A lecture is useful in giving directions for an activity or in summarizing the main points developed in discussions or by another method.

The lecture method also has limitations and disadvantages:

1. The lecture method is not appropriate for certain types of learning, such as acquiring motor skills. Trainees can only develop such skills through practice.
2. Because feedback is limited, especially in formal lectures, the trainer may not be able to estimate the trainees' progress. Lecturers tend to present too much information in a short period of time. Much of this information is not retained by the passive listener, and the trainer has little accurate means of determining what has been learned.
3. Learning is an active process, but the lecture method tends to foster passivity and dependence on the instructor. Trainees do not feel responsible for the learning to be done.

This last limitation can be minimized by holding question and answer periods during the lecture. Also, lectures should always be supported with visual aids such as chalkboards, flipcharts, handouts, slides, and overhead projectors. Lecture is probably the easiest method to videotape as there is only one presenter who is generally stationary. Videotaping is an ideal way to show trainers how they come across to the audience.

Techniques for a Successful Lecture

For a successful lecture, analyze the audience, organize the main points in a logical order, and use visual aids.

To prepare for a lecture, you must analyze your audience. This can be done quite simply. Just knowing the general work and educational background of the trainees, their ages, and experience will help the trainer choose the material to be presented. Someone who has previously worked with this group of trainees may be able to tell you what to expect.

Determine the purpose of the talk and organize it by choosing the main points and arranging them in logical order. When the talk will launch a discussion, avoid covering the points the trainees themselves are to develop during the discussion.

Depending on the trainees' knowledge of the subject matter, decide how to make the points clear. Choose examples—short, colorful, occasionally humorous—that relate to the experiences of the trainees. Strong organization and clear verbal and visual support in the body of the lesson help trainees understand and retain the material.

Use audio-visual aids to accompany the talk, but only materials that are relevant and large enough to be seen by all the trainees. Keep the visual materials as simple and clear as possible. Remember to talk to the trainees and not to the viewgraph.

GUIDED DISCUSSION METHOD

In a guided discussion, trainees learn by actively sharing ideas, knowledge, and opinions.

The guided discussion method is an instructor-controlled, interactive process of meeting instructional objectives by sharing information and trainee experiences. In a guided discussion the instructor asks questions and summarizes concepts and principles learned but tries not to dominate the discussion. Unlike the lecture, in a guided discussion trainees are active participants. Trainees are encouraged to learn about a subject by actively sharing ideas, knowledge, and opinions. The flow of communication is among all the trainees rather than between individual trainees and the trainer.

The instructor must carefully plan the lesson to attain the desired learning outcomes. This goal is accomplished by guiding the discussion with appropriate questions and periodic summaries, which demonstrates that the thinking of the group is important to the trainer. A guided discussion can follow a lecture. Instructors will frequently present information and then launch a discussion on a few key points.

Questions
Anyone
?

The discussion method is effective for several purposes:

1. Developing knowledge and attitudes (useful in supervisory, clerical, or safety training).
2. Helping trainees develop skill in reasoning and problem solving.
3. Accomplishing changes in attitude and behavior.
4. Deepening understanding of topics on which there are different points of view.

> In discussion, trainees share their attitudes and experiences. They are often reassured to find that others feel as they do and have similar problems.

A guided discussion has several limitations:

1. The size of the group limits the use of a guided discussion. A group of 5 to 20 works well.
2. Instructors must be willing to give up some of their control of the training session. The instructor cannot just present the material directly to the trainees. The instructor must be able to follow the discussion, not lose patience with the trainees, and at the end of the session summarize points made.
3. Trainees must have sufficient confidence in the discussion leader to raise questions freely. Reticent students may find this method difficult. Trainees must believe they can raise a point of view not generally stated.
4. A guided discussion requires as much preparation time by the instructor as a lecture, but requires more time as a training activity. Generally it takes longer to cover an idea through guided discussion than with a lecture or a film.

Techniques for a Successful Guided Discussion

Planning

1. Determine the basic purpose of the discussion.
2. Summarize what you know about the subject and get more information if necessary.
3. List a few questions to start the discussion and to get major points across. However, these questions should not later be allowed to prevent the discussion from flowing naturally.
4. Determine whether visual materials will help the discussion and, if so, arrange to have them. A pertinent filmstrip may help provoke interest, focus on the point to be discussed, or provide trainees with needed background material. A reading or other assignment may be completed beforehand.
5. Provide some equipment, such as chalkboard or newsprint and felt marking pens, for listing the important points to be made during the discussion as well as questions left unresolved. The recording may be done by the trainer or by a trainee. It will provide an orderly, complete record that will be helpful in summarizing the discussion and, later, in evaluating the training event.
6. If the training area permits, plan an informal seating arrangement, such as a circle or horseshoe, in which the trainees can easily see each other and the discussion leader.

Initiating

1. Clarify the topic to be discussed and arouse interest in it. A short lecture, a motion picture, an amusing story, a short description of a problem situation, or perhaps reference to an assignment the trainees have just completed may be the basis for opening the discussion.
2. Phrase your questions to require more than just a "yes" or "no" answer. At the same time, make the questions concrete enough to permit the trainees to organize their thinking about them and to respond within a few minutes. Rather than ask simply "What is supervision?" ask "What characteristics have you noticed in good supervisors you have known?"
3. Be prepared to wait for someone to respond. It frequently requires courage for a trainer to wait through moments of silence while the trainees are deciding how they feel about the topic and what they wish to say. Trainees may be reluctant to speak because they feel they have nothing important enough to say or that others can say it better.
4. Materials such as a series of case problems, questions, and factual data can stimulate meaningful discussion about certain topics.

Guiding

1. Encourage the trainees to do most of the talking until you have an idea of how much they know and where you, as the resource person, can best make your contribution.
2. Ensure that each trainee who wishes to speak gets the opportunity and that no one dominates the discussion. Shy trainees whose faces indicate they are almost ready to speak should be encouraged by a smile or a nod but never forced to participate. Trainees who are dominating the discussion may be tactfully discouraged by a remark such as "While we're on this point, let's hear how some of the others feel about it," or "Could we save your other points until later and come back to them if we have time?"
3. Repeat some of the trainee's ideas in order to emphasize the vital points that have been made.
4. When necessary, offer information, correct misunderstandings, and bring out additional points of view. In doing so, make your comments brief and to the point and draw the trainees back in the discussion.
5. Keep the discussion on the subject. Not only do trainees expect this of the trainer but they also maintain greater interest in a discussion that has direction than in one that rambles. One way to get back on course is to summarize briefly what has been said up to that point, then ask questions to encourage trainees to go on from there.

6. Promote exchange of opinions among trainees. Encourage them to use the comments of others as well as their own in the discussion. "The following points have just been made. How do these influence the conclusions we reached earlier?"
7. When a prolonged silence occurs, find out its cause by using open-ended questions., By watching body movements and facial reactions, you can usually tell whether trainees are bored, confused, in agreement, or in disagreement.
8. If trainees appear confused, summarize what has been covered up to that moment, encouraging questions.
9. If disagreements arise, try by your own calm behavior to gain respectful, good-humored attention for all points of view. A trainer should not become involved in the argument itself.

Ending

1. Watch for signs of restlessness and end the discussion while interest is still high.
2. If appropriate, summarize the major points that have been made or have a trainee summarize. If major points have not been adequately covered in the discussion, include these in your summary.
3. You may find that some trainees will linger after class to talk about their ideas. Some trainees may have been too shy to speak in class but have excellent comments to make; encourage them to share ideas with the group at the next opportunity.
4. If interest is keen, encourage trainees to continue the discussion among themselves after class.

DEMONSTRATION METHOD

A good demonstration followed by practice is an effective way to teach skills.

The demonstration method is a practical step-by-step performance by the instructor of a process, procedure, or other activity with a detailed explanation of each step. A demonstration should be accompanied or immediately followed by having trainees practice the activity or skill being demonstrated.

A demonstration has several advantages:

1. A demonstration is especially helpful in technical and skill training, because it is the link between explanation and practice.
2. Demonstration accompanied by trainee practice is an excellent method for teaching activities that require attention to detail and a high degree of accuracy, such as completing time sheets or pay forms.
3. By watching a demonstration, listening to the trainer explain what he/she is doing, and doing the activity themselves, trainees are more likely to remember than if they simply heard an explanation or watched a demonstration.
4. The practice also offers trainees the opportunity to be physically active after periods of passive sitting and listening.

But unless a demonstration is done properly, it will be of limited value:

1. A good demonstration requires a great deal of time for proper preparation.
2. A demonstration should use the actual equipment or materials trainees will work with on the job.
3. A demonstration of a skill for imitation by a trainee should not last too long. The only way to master a skill is by doing—not by seeing.
4. The trainee group must be small enough so that all trainees will be able to see and hear the demonstration clearly.
5. Class time must be sufficient for all necessary stages of the demonstration. Some demonstrations suffer from too rapid presentation. Avoid presenting something new before the preceding point is assimilated. People can only watch one thing at a time.

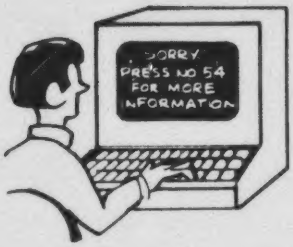
Techniques for a Successful Demonstration

Planning

1. Break down the activity or skill into steps in logical order.
2. Become thoroughly familiar with the steps, practicing them before a mirror or before another trainer or a neighbor.
3. Decide whether trainees should practice each step just after you demonstrate it or should practice only after you have completed your entire demonstration and explanation.
4. Plan sufficient class time to permit an introduction, step-by-step demonstration and explanation, thorough practice by the trainees with guidance by the trainer, and final discussion and review.
5. Arrange the training area so that all trainees can clearly see and hear the demonstration.
6. Have the necessary materials in order and within easy reach.

Delivery

1. Tell briefly what you are going to demonstrate, its value to the trainees, and what in particular the trainees should watch for.
2. Show and explain the activity or skill, or the steps of it, one at a time. Answer questions and perform a step again if necessary.
3. Have the trainees try what you have demonstrated either after each step or at the end of your demonstration. Allow sufficient practice time so that all trainees may receive guidance. Encourage trainees who know the skill or learn it quickly to help others.
4. At the end of the practice time, emphasize again how trainees may use the new activity or skill on their jobs. Review the steps demonstrated. Describe the equipment needed and suggest possible substitutes. Suggest resources for further study.



PRACTICE METHODS

Practice methods provide trainees with experience in applying new knowledge, skill, and attitudes under conditions similar to work situations, experiences, or dangers. The practice method should always include immediate feedback, allowing the trainee to correct any mistakes.

Many different types of activities have been developed using the practice method. Three of the most common practice activities are simulation, role playing, and case studies.

Simulation

Simulation allows trainees to practice potentially hazardous or critical procedures in a safe environment.

Simulation is one of the most important aids for technical trainers in many fields. By using simulators (a mock-up or duplicate of equipment, controls, etc.), trainees are able to practice without constant anxiety over making mistakes that will endanger themselves or the equipment. This makes it a "safe" training experience, which is especially important for operator training in highly complex and automated industries, where interdependent, sensitive controls have to be operated with great skill and care.

Practice on the simulator must be preceded by necessary lower-level learning of motor skills and knowledge. Practice sessions should be kept short in the beginning and gradually lengthened as the trainee's abilities improve.

Another type of simulation is hands-on practice for learning skilled motor acts that require significant coordination. This type of simulation is done under the guidance of the instructor. The learner (trainee) performs lower-level motor skills again and again until they are habitually correct. For example, this method could be used to train a word processor operator to set up rulers (margins) on the machine. Here a series of motor skills must be learned and practiced in order to use the machine proficiently.

Under the guidance of the instructor, the learner progresses from partial skills to full motor skills. Advanced practice continues until correct performance becomes routine to the degree called for by the instructional objectives. The instructor must monitor all practice until he or she is assured that the habits formed are correct.

Role-Play

In a role-play the trainees act out a situation based on real life. No acting ability is necessary because of the real-life quality of the situation. Trainees role play the attitudes and behaviors involved in carrying out a task or job responsibility. For example, the trainees are asked to assume roles such as the overly enthusiastic secretary, the bossy supervisor, or the worker unconcerned with safety. The outcome of the role-play depends upon the behavior spontaneously arising from these attitudes and emotions. In most role-plays, real feelings develop.

Numerous benefits derive from role-play:

1. It is highly participatory for the trainees. Each trainee assumes a role and acts out an attitude or situation relevant to his/her job.
2. It is useful in improving the skills needed in work with people.
3. It helps trainees become aware of the reasons behind behavior and of the effect of their own behavior on others. This awareness causes the role-players and observers to more closely experience the feeling and reactions connected with the situation.
4. It is a more vivid experience than merely talking about a problem.
5. Role playing lends reality to any theory that has been presented.

But role playing also has limitations:

1. It must be restricted to clear-cut problems and situations.
2. Role-play requires careful supervision and direction by the trainer.
3. There is always the possibility that emotions will be so vividly portrayed as to disturb the players or the audience.
4. Trainees may suffer anxiety from the anticipation of having to play a role.
5. It takes a great deal of training time.

Techniques for a Successful Role-Play

1. Select a situation meaningful to the trainees. However, the first time a role-play is to be given, select a situation that does not directly include the job responsibilities of any of the trainees. Trainees are able to observe and analyze more objectively a situation that does not "hit too close to home." In the discussion following the role-play, the trainer will help the trainees relate what they have observed to their own jobs.
2. Let trainees volunteer for the role-play rather than suggesting that they take parts.
3. Give instructions to each player clearly detailing who he/she is and how he/she "feels" at the beginning of the role-play. Point out to the players that they must discipline themselves to react to the behavior of others not as they normally would but as would the people they are supposed to be.
4. Give them a few minutes of privacy to get into the moods of their roles.
5. During this time, describe the situation to the rest of the class: you may or may not inform them of the specific emotions to be portrayed. They should play the role of objective observers. Give them clear instructions regarding what they should be looking for.

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6. Allow the role-play to continue until real feelings develop among the players. This usually takes from three to seven minutes of action. *The purpose of the role-play is to stimulate appreciation of the human behavior involved in the situation.* It is not necessary to continue the action until the situation is resolved.
7. After the role-play, discuss what occurred. The trainer should attempt to help the trainees increase their skills from the experience. The discussion should be focused on how the role-play can contribute to an understanding of the knowledge, skills, or attitudes you are trying to develop.

Start the discussion with the players telling why they behaved as they did and what their inner responses were to the behavior of the others in the role-play. This allows the players to set the tone of the criticism. If the players show by their own observations that they are not self-conscious, the observers are more likely to feel free to express their full reactions.

The discussion may be developed along the lines of questions such as these:

- Did any player suddenly change his or her behavior?
- Why do you think this happened?
- As time went on, did the players seem to understand each other more or less? Why?
- How do you think the action would have ended had it continued?
- What might the players have done to improve their relationship?

At first the trainer should keep the trainees focused on the role-play. Then he or she should help the trainees relate the analysis to their jobs, but keep specific names out of the discussion.

Case Study Method

A case study allows the trainees to apply new knowledge by analysis and problem-solving.

Case studies are written descriptions of real or imaginary situations. A case study may describe a labor or personnel problem, operating problem, or incident appropriate to training that can be analyzed and discussed by the trainees. The case study can deal with the behavior of a person or a group. Presenting a case study gives trainees an opportunity to apply new knowledge. It stimulates discussion and participation. Case study enables the trainee to develop skills in responding to various situations. This method is especially helpful in supervisory, clerical, and safety training.

Case studies are particularly useful in helping trainees explore different ways to deal with typical problems in the workplace. However, the case must be well prepared and focused on the problem areas. Cases are usually designed to focus on only one or two aspects of a situation. The facts presented in the case descriptions tend to relate to these aspects alone.

The statement of the problem or case study should be brief and simply worded (meeting the requirements of the instructional objective). It can be made believable by including statements of individuals involved in the problem. These will be used to reveal attitudes and feelings. The problem or case study should be one that involves decision and action, and should suggest complex problems, which lack obvious solutions. Finally, there should be definite instructions as to what is to be done. These instructions are usually in the form of questions addressed to the participants about how to solve the problem.

The instructor should distribute a copy of the case study to each individual so that the trainee can refer to it as necessary. The individuals should be given time to work on the problem and arrive at a solution. Then a discussion should be conducted. The purpose of the discussion is to help the individuals use problem-solving techniques.

You should guide the individuals to consider each of the following steps:

1. Look for the real problem. By getting answers to questions such as who, what, when, where, and why, you can pinpoint the problem and its causes.
2. Gather all the facts. Eliminate guesswork and opinions.
3. Evaluate the facts.
4. Develop possible solutions.
5. Select the best solution and apply it.

Although all steps may not apply to a particular problem or case study, the individuals should be aware of the steps.

In summary, case studies are used to allow learners to test their conceptions, procedures, and practices against work-like situations, such as troubleshooting. They help increase the learners' powers of observation, abilities to analyze, and problem-solving talents. They cause the learners to translate vague principles and practices into practical what-to-do's and how-to-do's. It is one of the best ways to train individuals how to think.

SUMMARY

The instructional objectives are written and the training materials have been reviewed. Are you now prepared to face that group of trainees? As you put together the instructional package, it is natural to ask yourself, "What's the best way to present the information?" What you really need is an appropriate *method* of instruction. This chapter has discussed several methods of instruction and given some guidance on choosing and using them successfully.

Instructional methods are the procedures used to involve the learners, the trainer, and the training materials to ensure that learning meets the instructional objectives. An instructional method is a tool. Each tool in a carpenter's toolbox has a specific use, and the carpenter changes tools for different parts of a job. An instructor must do likewise, varying and mixing methods to suit the needs of the subject matter, the objectives, the trainees, and the situation. Carefully selected methods will assure that learning is the outcome of a training session.

Instructional methods are not chosen to show what the trainer knows and can do. Nor should a method be selected because it is the trainer's favorite or one with which he or she feels most comfortable. Instead the instructor decides what is best for the *learner* to experience to meet the objectives. In making that selection, the instructor considers the ways people learn: by practicing, by observing, by discussing, by listening, and by participating.

Finally, remember that one method will seldom provide all the learner experience needed in a training session. Design the session to include a variety of methods, each of which is appropriate to some part of the required learning and feasible in the situation.

TRAINING METHODS
Course Guide

PURPOSE

Armed with clearly defined instructional objectives and course materials, you must select the training (instructional) methods that best match those objectives and materials. Training methods are selected based on (1) what type of learning is to take place (knowledge, skill, attitude) and (2) what type of trainee participation is desired. Each method affords various results depending on how it is used. A trainer must vary methods used during training to keep trainees involved and to maximize learning.

MODULE OBJECTIVE

(As stated to the trainees.) Given an overview and demonstration of several training methods, you will be able to (1) assess and select methods appropriate for different types of training sessions you might be asked to conduct and (2) demonstrate competency in the use of various training techniques.

TIME

Three hours

WHO

Occasional trainers responsible for developing or delivering presentations.

TEXT AND REFERENCE MATERIAL

Instructor's Guide

Handouts

Miller, W. R., and H. C. Rose. *Instructors and Their Jobs.* American Technical Society; and *Train the Trainer*, an instructor program prepared by Consult, Ltd., 1980, can be borrowed from:

ETA Resource Clearinghouse
Room 8221
Patrick Henry Building
201 D Street, N.W.
Washington, D.C. 20213

EQUIPMENT AND SUPPLIES

Classroom

Flipchart

Overhead projector (optional)

Handouts

Enough 8 1/2" x 11" paper for entire class

Scissors for all trainees

TRAINING METHODS

Lecture

Guided Discussion

Demonstration

Practice

DETAILED OUTLINE

A. **Introduction to Training Methods—Illustrated Lecture** (15 minutes) (See Instructor's Guide for background information.)

Key points:

1. Definition
   - Ways and means of instructing
   - Set of activities that result in learning by the trainee
2. Categories of instructional methods
   - Trainer alone—trainer is focal point, trainer presents information, instruction and interpretation, lecture.
   - Trainer and trainee—interaction occurs between trainees and trainer, most effective with small group, allows for discussion and exchange of ideas.
   - Trainee alone—allows for individually paced progress, simulation.

FLIPCHART	**COMMENTS**
Training Methods 1. Ways of instructing. 2. Set of activities that result in meaningful learning. 3. Variety of approaches that involve the trainer.	Different techniques generate different levels of involvement. Use Handout No. 1, "Continuum of Involvement." On handout have trainees write category headings that match method on continuum (i.e., "Lecture—Trainer Alone") No one particular method is suitable for all training situations. Change of pace in methods used maintains trainee interest.

FLIPCHART	**COMMENTS**
Four Instructional Methods 1. Lecture 2. Guided Discussion 3. Demonstration 4. Practice	Briefly explain each method and give examples.

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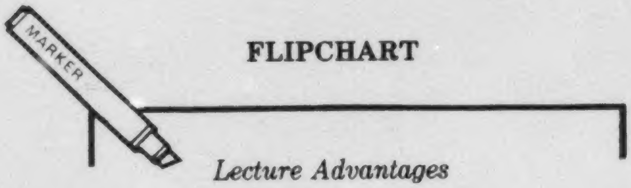
B. Lecture Method—Illustrated Lecture (15 minutes)

Key points:

1. NOTE THAT LECTURE IS MOST OVERUSED METHOD. TOO MANY TRAINERS RELY LARGELY OR SOLELY ON THIS METHOD.
2. Formal Lecture (speech)
   - Large groups
   - No active participation by trainees
3. Informal Lecture (lecture-discussion)
   - Smaller group size
   - Encourages limited participation by trainees due to question/answer exchange

FLIPCHART



Lecture Advantages

1. Present many ideas in short periods of time.
2. Suitable for introducing a subject.
3. Convenient method for instructing a large group.
4. Useful for giving directions/summarizing.

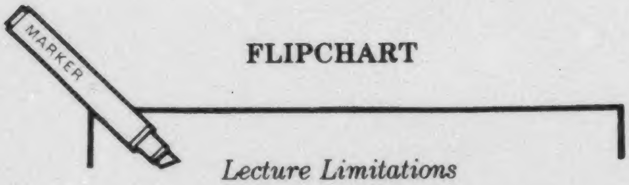
COMMENTS

1. Logically organized material presented in rapid sequence.
2. Few resources needed when delivering.
3. Only efficient way to reach large groups.

On flipchart or overhead put information found in Handout No. 2, "Lecture Method."

Expand on information given on handout.

FLIPCHART



Lecture Limitations

1. Not effective for skill training unless combined with other methods.
2. Difficult to evaluate training progress
3. Low trainee retention and participation

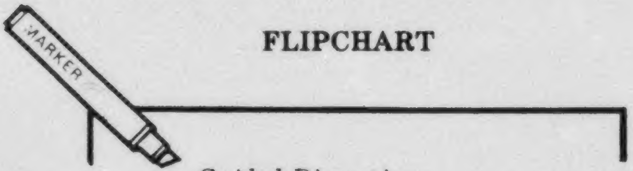
COMMENTS

1. Skills are learned by practice.
2. Too much talking by instructor.
3. Learning should be an active process. Learners tend to be uninvolved.

4. Ask trainees when appropriate to use lecture method:
   - Presenting theory or ideas. Introducing a subject or giving instructions (used in combination with other methods).
   - Have little time or resources available.
   - Not aiming to build skills.
   - Have a large group.

C. **Guided Discussion—Lecture and Group Discussion** (30 minutes) (See Instructor's Guide for background information.)

FLIPCHART



Guided Discussion

1. Definition
2. Advantages:
   Useful for knowledge and attitude objectives.
   Develop skills in group reasoning and problem-solving.
3. Limitations:
   Group size limited.
   Instructor must give up some control.
   Needs large amount of time.

COMMENTS

Remember to point out:

Importance of types of questions you should use:
  Lead-off (initiating)
  Follow-up
  Overhead—to whole group
Important to summarize ideas.
  Keep to the topic.
  Keep discussion moving among the trainees, not between trainee and instructor.

Key points:

1. Refer trainees to material on Planning, Initiating, Guiding, and Ending in the Instructor's Guide.
2. Pass out Handout No. 3, Guided Discussion, and answer any questions.
3. Pass out Handout No. 4, How to Use Questions Effectively.
4. Have trainees give specific examples of "when to use" Guided Discussion, noting that this method has several uses:
   - Accomplishes change in attitude (safety).
   - Promotes understanding of differing points of view (supervisory, clerical)
   - Allows trainees to share their experiences (technical).
   - Helps achieve group consensus.

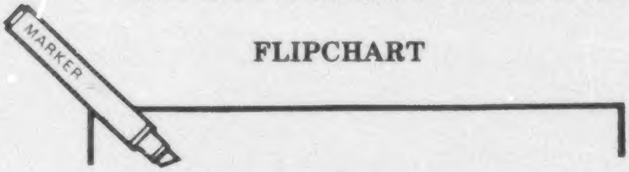
Group Exercise

- After concluding the lecture and answering questions in reference to Handout No. 3, inform the group that they will participate in a Guided Discussion for the next 10 minutes on a topic of your choice. (Care should be taken in choosing a topic which is general enough to include all the trainees, but not controversial. This should not turn into a gripe session.) Also inform the class that they should observe how you as instructor direct the discussion.
- Take a few minutes after the discussion to solicit trainee comments regarding how you as instructor guided the discussion.

D. **Demonstration** (10 minutes) (See Instructor's Guide for background information.)

Key points:

1. Definition: a practical showing, in a step-by-step way, by the instructor followed immediately by trainee practice of the activity
2. Trainer should use an example while discussing this techniques (i.e., the helicopter Handout No. 5 or a senior life saving dummy).
3. Go through helicopter demonstration, allow trainees to complete project.
4. After trainees practice the activity, have trainees discuss the advantages and limitations of a Demonstration with the aid of a flipchart.



FLIPCHART

Demonstration Advantages
High trainee involvement.
Calls attention to detail.
Good retention.
Immediate feedback.

Limitations
Takes more training time.
Group size limited.
Must not last too long.
Not useful for theory training.

COMMENTS

Demonstration is especially useful in skill and technical training (have trainees give examples).

Using sight, hearing, and motor skills,

- trainees gain confidence.
- trainer can correct mistakes before they become habits.

Pass out Handout No. 6, Demonstration.

5. Ask trainees when appropriate to use demonstration method:
    - Want to transmit hands-on skills
    - Want to see immediate results
    - Concerned with direct application of learning

E. **Practice Methods—Lecture/Discussion** (30 minutes) (See Instructor's Guide.)

Definition: provides practice for trainees in knowledge, skills, and attitude objectives under conditions similar to work experiences or dangers under guidance of an instructor.

1. *Simulators/Simulations—Illustrated Lecture*

   Definition: Practice with simulators is conducted under guidance of an instructor.

FLIPCHART	**COMMENTS**
Simulation Advantages: Duplicates actual equipment to be used. Excellent for technical trainees. "Safe" training experience. *Limitations:* Very expensive. Space needed to store simulator.	Used for instruction on selected and critical skills. Very useful for complex man-machine relationships. Portion of total system can be simulation (examples include engine troubleshooting, production line work, work done under hazardous conditions). Simulator need not duplicate whole task, must simulate what trainee is to transfer to operating situation.

Have trainees give specific examples of when appropriate to use:

- Real equipment too complex to learn specific procedures as a whole
- Real equipment too dangerous
- Real equipment too expensive for instructional purposes only

2. *Role-Play—Illustrated Lecture*

Definition: simulated situation in which trainees act out the thoughts and behavior of persons in particular roles:

- Acting out of human behaviors involved in carrying out a job
- Improving skills involved in working with people
- Helping in becoming aware of reasons behind behavior and of the effect of their own behavior on others

a. Excellent for supervisory skills and attitudinal changes

FLIPCHART

Role-Play Advantages

Highly participative for trainee.

Improves people-to-people skills.

Lends reality to theory learning.

Personal trainee learning experience.

Limitations

Must be kept to very strict boundaries.

Takes lots of training time.

Difficult to design and write.

COMMENTS

Role-play does not require acting ability.

Helps trainees to become aware of reasons behind behavior of individuals.

Trainees experience the feelings of others.
A more vivid experience than just talking about a problem, therefore, more retention.

Must be careful, good possibility of strong emotions being exhibited.

Anxiety felt by trainees in having to play a role.

b. Ask trainees when appropriate to use role play:
  - Skill building in interpersonal relationships
  - Concern with direct application of knowledge

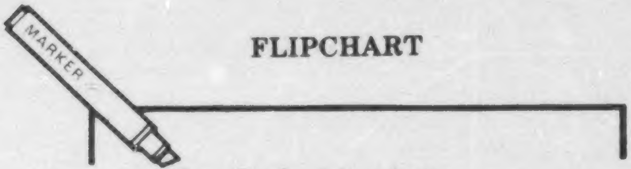
c. Distribute Handout No. 7, answer questions.

d. Trainees can be active participants or observers and still learn from the experience.

3. *Case Study—Illustrated Lecture*

Definition: trainer defines a situation, usually written, which describes a specific incident or organization problem requiring trainees to study and analyze the situation, to discuss, and then to determine and develop possible solutions.

- Useful to supervisory, clerical, and safety training
- Statement of the problem or case study should be brief and simply worded



FLIPCHART

Case Study Advantages:
Learning can be readily applied.
High trainee involvement.
Good retention.
Personal trainee experience.

Limitations:
Takes much training time.
Takes much development/ preparation time.
Case study must fit well with trainee situation.

COMMENTS

Applies new knowledge.
Stimulates discussion and participation.
Trainees combine several levels of learning at once.
Trainee develop skills in ways of responding to various situations.

Have trainees give specific examples of when appropriate to use Case Study (Handout No. 8).

F. **Review Methods presented by Guided Discussion and Handout No. 9** (15 minutes)

G. **Four-Step Method—Lecture and Handout No. 10** (15 minutes)

Key points:

1. Especially useful for skills training (intelligent manipulations, or dexterity and coordination in performance of learned physical tasks) on the job.
2. Can be applied to any training situation—skills, knowledge, or attitude.
3. Combines principles of learning, builds bridges from known to new skills.
4. Provides a pattern for planning and presenting skills training.
5. A good review of needed steps to follow when preparing a training session or a training plan.

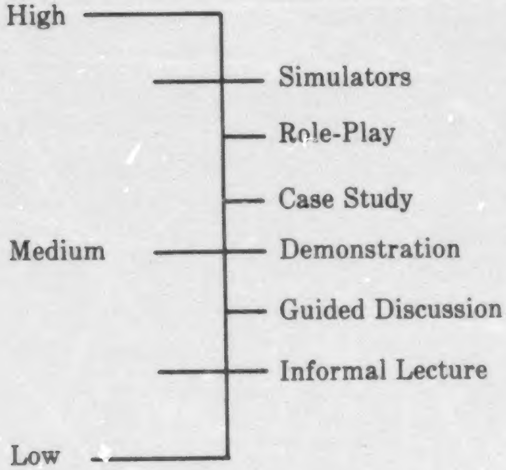
H. Group Exercise (1 hour)

Key points:

1. Present exercise as opportunity to try out and observe the use of previously introduced methods (demonstration, lecture, role play, since have already practiced guided discussion method).
2. Divide group into three smaller groups:
    - Each group will be asked to demonstrate the use of one training method to the large group and each will receive both the method and an outline of the subject matter to use (the instructor will have to prepare these envelopes using Handouts Nos. 11, 12, and 13).
    - The technique each group receives should be the dominant method used in the presentation; although a combination of methods may be appropriate.
    - The total presentation should be 10 minutes long.
    - Feedback (by trainer and trainees) will center on the mechanics of the method, emphasizing things to do and things to avoid when using each method.
    - Ask for questions.
    - Ask one member from each group to come forward and randomly select a method envelope (in which you have placed all necessary materials).
    - Direct group receiving "Demonstration" envelope to keep their subject a secret.
    - Instruct groups to spend 30 minutes on preparing this presentation
3. Convene large group. Announce that demonstration group will go last and ask for a volunteer group to go first.
4. Allow each group to present their method followed by critique, which should:
    - Deal with how presenting group felt about presentation and what were the difficult and easy parts of using the method
    - Allow large group discussion. Focus comments on helpful points such as:

        Need for clear, precise directions
        Clear explanation in setting up a role-play
        Use of visual aids in informal lecture
        Maintenance or loss of group control by presenting group

THE DELIVERY OF TRAINING
Participant Involvement Continuum


High
Simulators
Role-Play
Case Study
Medium
Demonstration
Guided Discussion
Informal Lecture
Low

73

LECTURE METHOD
(Informal Lecture)

Advantages

1. Present many ideas in short period of time.
2. Suitable for introducing a subject.
3. Convenient method for instructing large group.
4. Useful for giving directions and summarizing main points.

Limitations

1. Not appropriate for skill training.
2. Difficult to evaluate trainee progress.
3. Low trainee retention/participation.

When to Use

1. Presenting theory or ideas.
2. Introducing a subject or giving instructions (used in combination with other methods).
3. Have little time or resources.
4. Not aiming to build skills.
5. Have large group.

GUIDED DISCUSSION

Advantages

1. Useful for knowledge and attitude objectives.
2. Develop skills in group reasoning and problem-solving.
3. Reviews material already taught.
4. Can stimulate critical thinking.

Limitations

1. Group size limited.
2. Instructor must give up some control.
3. Needs a large amount of time.
4. Discussion may be dominated by a few.

When to Use

1. Changes in attitudes needed.
2. Gaining of understanding of differing points of view.
3. Attainment of group consensus desired.
4. Sharing of trainee experiences sought.

HOW TO USE QUESTIONS EFFECTIVELY

To avoid long structured monologues, the trainer can simply use questions. In fact he/she can recede into the background almost completely if the right questions are used.

Types of Questions

Closed questions. A question that can be answered adequately in a few words, e.g., yes/no or straight facts. (Naturally these questions fall short in stimulating a discussion.)

Open questions. A question that requires more than a few words for an adequate answer. (These will stimulate participation and discussion.)

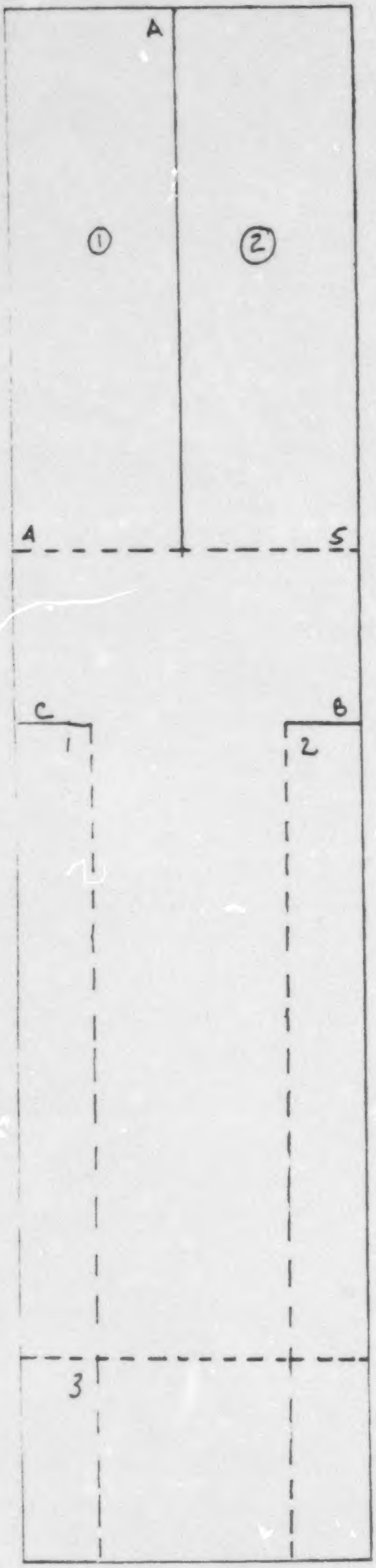
Characteristics of Good Questions

- The answers are more than one word.
- The answers are not obvious.
- The question is concisely worded.
- The question is easily understood.
- Use of "Why, What, When, Where, Who, and How" appear in all open questions.
- Each question requires thought before answering.
- Each question relates to the lesson being taught.
- Finally, the questions are prepared in advance.

Using Questions

- Prepare—Plan your questions.
- Ask the question—This starts the learner learning process.
- Wait—for the answer. New trainers have very little tolerance for silence.
- Ask someone by name—This might be necessary to break the ice.
- Listen to all answers—Don't cut anyone off and get all the answers—then sort them out. (You might cut them off forever.)
- Review, Reinforce, Repeat—the 3Rs (used in all training).

Questions are a major function in getting total class involvement. Trainee participation is never easy. The trainer must have faith in the concept and have the will to develop participation. Otherwise, the inevitable result will be more lectures and more speeches, courtesy of the trainer.



Training Methods
Handout No. 5
page 1 of 1

PAPER HELICOPTER

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CUT OUT TEMPLATE:

STEP 1. Cut the line "A" from the "A" to the center of Fold Line 4-5.

STEP 2. Cut the line "B" from the outer edge toward the center until you reach Fold Line 2.

STEP 3. Cut the line "C" from the outer edge toward the center until you reach Fold Line 1.

NOW YOU ARE READY TO BEGIN FOLDING ON THE DOTTED FOLD LINES:

STEP 4. Fold the Fold Line number 1 from Cut Line C to the bottom outer edge

NOTE: Use your thumbnail to make the final sharp-edge crease.

STEP 5. Fold the Fold Line number 2 from Cut Line B to the bottom outer edge

NOTE: Again, use your thumbnail to make a final sharp-edge crease.

STEP 6. Fold Line 3 should now be folded by bringing the bottom upward toward the top along Fold Line 3 and creasing the fold line sharply by using your thumbnail.

STEP 7. Fold the Fold Line 4 of Panel 1 toward you until it is folded just beyond a 90o angle.

CAUTION: FOLDING BEYOND THIS POINT BY MORE THAN A FEW DEGREES MAY CAUSE THE ROTOR TO MALFUNCTION.

STEP 8. Fold the Fold Line 5 AWAY from you until Panel 2 is also folded just beyond a 90° angle.

EVALUATION: YOUR PROJECT IS NOW COMPLETE. IT IS TIME TO EVALUATE YOUR EFFORTS. HOLDING THE HELICOPTER BY ITS FUSELAGE, STAND UP, RAISE THE HELICOPTER OVER YOUR HEAD, AND ALLOW IT TO FREE-FALL.

OBSERVE ITS FLIGHT PATH. IF IT CRASHES AND BURNS, YOU FAIL THE LESSON. IF IT LANDS WITH SOME DEGREE OF SOFTNESS, YOU PASS.

DEMONSTRATION

Advantages	**Limitations**
1. High trainee involvement.	1. Takes more training time.
2. Calls attention to detail.	2. Group size limited.
3. Good for trainee retention.	3. Often lasts too long.
4. Gives immediate feedback to trainee.	4. Most useful for theory training.

When to Use

1. Want to transmit hands-on skills.
2. Want to see immediate results.
3. Concerned with direct application of learning.

ROLE-PLAY

Advantages

1. Highly participative for trainee.
2. Improves people-to-people skills being exhibited.
3. Lends reality to theory learning.
4. Personal trainee learning experience.
5. Difficult to write and design role sheets.

Limitations

1. Takes lots of training time.
2. Possibility of strong emotions.
3. Must be kept within very strict boundaries.

When to Use

1. To build skills in interpersonal relationships.
2. Concerned with direct application of knowledge.
3. To improve supervisory skills.
4. Effect changes in attitudes.

Training Methods
Handout No. 8
page 1 of 1

CASE STUDY

Advantages

1. Learning can be readily applied.
2. High trainee involvement.
3. Personal trainee experience.
4. Good retention.

Limitations

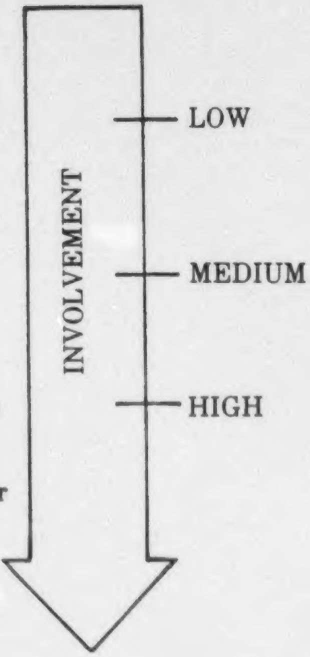
1. Case study must match training situation.
2. Takes much development/preparation time.
3. Takes much training time.

When to Use

1. Problem-solving training.
2. Application of theory (example: learning theory).
3. Gain awareness of personal style.
4. High concern for application of training back on the job.

Training Methods
Handout No. 9
page 1 of 1

TRAINING METHODS



WHEN YOU WANT . . .	TRY THIS . . .
To only give information	Lecture
To encourage trainee examples	Guided Discussion
To give trainees hands-on experience	Demonstration
To have trainees simulate interpersonal communications	Role-Play
To give problem-solving opportunities to trainees	Case Study
To have trainees simulate a process or procedure	Simulation

EXPLANATION OF THE FOUR-STEP METHOD OF INSTRUCTING

As the instructor of skills training, you want to be sure the training you do is effective. An excellent way to achieve effectiveness is to apply the FOUR-STEP METHOD of instructing to the training situations you face. The four-step "method" is actually a training pattern to follow that combines the methods previously presented with some form of evaluation.

The four-step method incorporates many of the principles of learning and builds a bridge for the learner from known skills to new skills. The important thing to remember about the four-step method is that it provides a tested and well-tried pattern for planning and conducting skills training.

1. The Preparation Step

When preparing for a training session, be aware of the necessary preparation to be done by the instructor and preparation of the learner.

- Preparation by the instructor includes all of the planning which the instructor must do before a training session begins.
- Preparation of the learner includes those things the instructor can do to prepare the learner to receive the information, for example, stating the instructional objectives at the beginning of a training session.

2. The Presentation Step

This step includes the presenting of new subject material to the learner(s) in the form of information and/or manual procedures. It is done in one or both of the following ways:

- Explanation—done by lecture.
- Demonstration—done by telling the learner(s) what to do, showing how to do it, and then offering the learner(s) an opportunity to do it. Remember to teach complicated skills in parts. As the learners accomplish each part, move to the next part.

3. The Application Step

During this step the learners actually apply or put into practice what has been explained or demonstrated to them, they "learn by doing."

As instructor,you must get the learner(s) thinking, talking, writing, and doing. This can be accomplished by using guided discussion, demonstration, or one of the practice methods. Be sure to supervise the learning situation closely and stay available to answer questions that may arise. Have the learner explain what he or she is doing, if performing a task, and quickly correct any mistakes in either learner performance or explanation.

4. The Evaluation Step

Here is where you find the answer to the question, "Did the learners learn?" Until you answer this question, neither you nor the learners can know how effective the training session was. The primary purpose of evaluation is NOT, as many instructors (and learners) think, to provide a means of rating or grading performance. The primary purpose is, or should be, to provide information to the learner or learners about the areas of the instruction in which there is weakness and provide information to the instructor about which parts of the training improvement were successful.

DEMONSTRATION

Instructions:

Using the demonstration training method, prepare a 10-minute training session on BUILDING A PAPER HELICOPTER

Your group will be given an authoritative text on the subject to help prepare your session.

Your trainee group can be the entire group or any part of it.

DEMONSTRATION HANDOUT

Demonstration is first of all a method of instruction. A well-planned and executed demonstration is a very effective method of instruction. It combines an explanation and portrayal by the instructor with practice by the individual and, therefore, gets the learner involved and brings all of the learner's senses into the learning process.

In this method, you tell the learner what to do, you show the learner how to do it, and then you give the learner an opportunity to actually do it.

Some important things for you to remember about demonstrations:

1. They are most effective with small groups or one individual.
2. When planning a demonstration, you must break the operation into its component steps and arrange the steps in logical order.
3. You must become completely familiar with the steps. This is most important if you are an expert for your skill is so smooth and quick you have forgotten it is made up of a series of small steps and part-skills. Walk through it and slow the action down.
4. You must arrange for any necessary equipment
5. Plan enough time for each individual to practice.
6. VERY IMPORTANT—Observe learner practice closely and provide immediate feedback. In this way you can spot and correct improper techniques before they become established habit patterns.
7. Summarize after all individuals have had an opportunity to practice.

PAPER HELICOPTER

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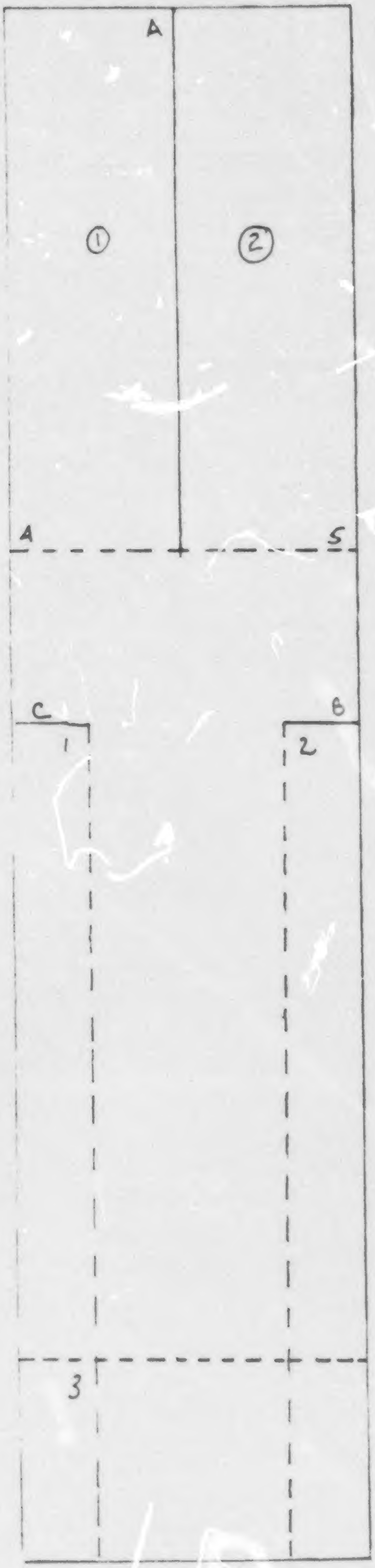

CUT OUT TEMPLATE:

STEP 1. Cut the line "A" from the "A" to the center of Fold Line 4-5.

STEP 2. Cut the line "B" from the outer edge toward the center until you reach Fold Line 2.

STEP 3. Cut the line "C" from the outer edge toward the center until you reach Fold Line 1.

NOW YOU ARE READY TO BEGIN FOLDING ON THE DOTTED FOLD LINES:

STEP 4. Fold the Fold Line number 1 from Cut Line C to the bottom outer edge

NOTE: Use your thumbnail to make the final sharp-edge crease.

STEP 5. Fold the Fold Line number 2 from Cut Line B to the bottom outer edge

NOTE: Again, use your thumbnail to make a final sharp-edge crease.

STEP 6. Fold Line 3 should now be folded by bringing the bottom upward toward the top along Fold Line 3 and creasing the fold line sharply by using your thumbnail.

STEP 7. Fold the Fold Line 4 of Panel 1 toward you until it is folded just beyond a 90o angle.

CAUTION: FOLDING BEYOND THIS POINT BY MORE THAN A FEW DEGREES MAY CAUSE THE ROTOR TO MALFUNCTION.

STEP 8. Fold the Fold Line 5 AWAY from you until Panel 2 is also folded just beyond a 90° angle.

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LECTURE (INFORMAL)

Instructions:

Using the lecture training technique, prepare a 10-minute training session on TIME MANAGEMENT TECHNIQUES.

The enclosed information is provided for your use in the training.

Your training population can be the entire group or any part of it.

Remember: an informal lecture encourages some participation by the trainees due to the question/answer exchange. Flipchart is available for visual aids.

TIME-SAVING IDEAS
Audience: Trainee group

I. Sharpen your awareness of time.
  A. Consider time as money and invest it wisely.
  B. Set priorities and follow them through.
  C. Divide time and tasks into manageable parts and conquer each part in turn.
  D. Ask the question: "What is the best use of my time now?"

II. Set time priorities that stick.
  A. Assign priorities based on value/time ratios.
    1. Realize that 80 percent of the value is usually realized in 20 percent of the time.
    2. Start with the most profitable parts of the large projects.
    3. Cut off nonproductive activities as quickly as possible.
  B. Arrange schedules around high priority tasks.
    1. Do first things first.
    2. Give yourself enough time to concentrate on the priority items.
    3. Select the best time of the day for the type of work required.
    4. Schedule appointments, where necessary, but always reserve at least one hour a day of uncommitted time.
  C. Focus on objectives.
    1. Keep in mind your long-term goals even while doing the smallest tasks.
    2. Keep a list of specific items to be done today.
    3. Lose a few battles in order to win the war.

III. Get high value tasks done fast.
  A. Allocate time daily to planning time.
    1. Plan your work and work your plan.
    2. Find one technique each day to help you gain time.
    3. Examine old habits for possible elimination or streamlining.
  B. Squeeze short tasks into otherwise wasted moments.
    1. Give up forever all waiting time.
    2. Keep handy a group of short tasks which can be done in between other activities.
    3. Have in mind some question to explore in spare moments.
    4. Recognize the value of time spent truly relaxing.

C. Find new ways to delegate.

1. Use your secretary to save your time.
2. Require completed work from your subordinates.
3. Search for opportunities to "de-skill" tasks.
4. Avoid tendencies to "do it yourself".

D. See unavoidable commitments as opportunities.

1. Less critical items provide safe opportunities to experiment.
2. Try increasing your work pace from time to time.
3. You can learn much about your management of time by observing how you handle routine activities.
4. Put the added meaning of self-improvement into doing the necessary tasks.

ROLE-PLAY

Instructions:

Using the role play training technique, prepare a 10-minute training session on GIVING AND RECEIVING FEEDBACK.

The enclosed information is provided for your use in the training.

Your trainee population can be the entire group or any part of it.

FEEDBACK

"Feedback" is a way of helping another person to consider changing his/her behavior. It is communication to a person (or group) which gives that person information about how he affects others. As in a guided missile system, feedback helps an individual keep his behavior "on target" and thus achieve his goals.

Some criteria for useful feedback:

1. It is descriptive rather than evaluative. By describing one's own reaction, it leaves the individual free to use it or not, as he sees fit. By avoiding evaluative language, it reduces the need for the individual to react defensively.
2. It is specific rather than general. To be told that one is "dominating" will probably not be as useful as to be told, "Just now, when we were deciding the issue you did not listen to what others said, and I felt forced to accept your arguments or face attack from you."
3. It takes into account the needs of both the receiver and giver of feedback. Feedback can be destructive when it serves only our own needs and fails to consider the needs of the person on the receiving end.
4. It is directed toward behavior which the receiver can do something about. Frustration is only increased when a person is reminded of some shortcoming over which he has no control.
5. It is solicited rather than imposed. Feedback is most useful when the receiver has formulated the kind of question which those observing him can answer.
6. It is well timed. In general, feedback is most useful when it occurs at the earliest opportunity after the given behavior (depending, of course, on the person's readiness to hear it, the support available from others, etc.).
7. It is checked to ensure clear communication. One way of doing this is to have the receiver try to rephrase the feedback he has received to see if it corresponds to what the sender had in mind.
8. When feedback is given in a training group, both giver and receiver have the opportunity to check with others in the group the accuracy of the feedback. Is this one man's impression or an impression shared by others?

Feedback, then, is a way of giving help; it is a corrective mechanism for the individual who wants to learn how well his behavior matches his intentions; and it is a means for establishing one's identity.

AUDIO-VISUAL AIDS

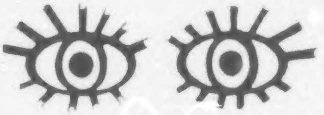
If you remember your many years in public school, the bulletin boards were covered with flashy colorful figures and lettering. It is likely that you and your fellow classmates were eager to help the teacher develop materials for those bulletin boards (or at least to assist in pinning them up). Unfortunately for you, the nature of those bulletin boards changed drastically through your years in school or the bulletin boards disappeared entirely.

This story makes a very important point. Young children are stimulated to learn visually at an intense level. As children grow into adult learners, the quantity of visual stimuli provided in the learning environment diminishes dramatically. Classrooms for advanced learning and professional seminars are typically devoid of visual learning stimuli. At best, instructors of adult learners tend to use hard-to-see viewgraphs and chalkboards.

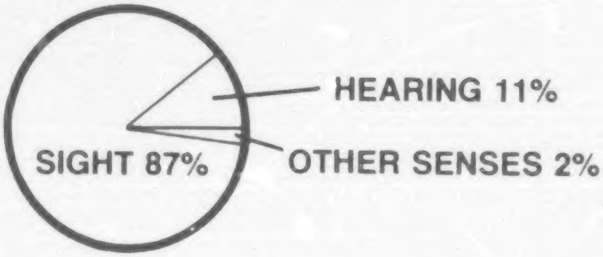
Using dramatic and impressive visual aids to communicate the learning material increases the likelihood of that material being retained for future use. Researchers in the learning field tell us that there are basically three modes used by learners to retain information:

1. Visual mode, i.e., sight
2. Auditory mode, i.e., hearing
3. Kinesthetic mode, i.e., eye-hand coordination, small muscle coordination, the physical ability of the entire human organism to mimic the activity it sees being demonstrated

Most adult learners employ all three modes—visual, auditory, and kinesthetic—to access information and retain it. Those learners who have an impairment in one or more of the modes have had to strengthen those modes available to them for learning. It is important to know that for learning, the eyes have it. Research has shown that over three-fourths of all learning is visual. Less than one-fourth of learning is auditory. So visual aids are needed for learning to take place.

THE  **'S HAVE IT!**

Modern research states that we learn through:



Audio-visual aids appeal to all three modes of learning, thus improving communication between the trainer and the trainees.

The point is that the adult learner is more likely to retain information and skills if all three modes are appealed to either on the job or in the classroom. Enhancing the audio-visual aids used in the learning situation will enhance the learning. Audio-visual materials will help appeal to all three modes of learning.

Occasional trainers sometimes think of instructional aids as a specialized field, to be handled by a specialist. You do not have to be a Cecil B. De Mille or a Walt Disney to create effective visual aids. Some types of instructional aids do require expertise to develop. But the important thing to remember is that using audio-visual materials improves communication between the trainer and the trainees. This improved communication can result in improved learning.

DEVELOPING VISUAL AIDS

Once you have completed an outline for a lecture, you must develop visual aids. The outline will help in the development of the visual aids. Mark on the outline itself where visuals might be used. Working with colleagues to brainstorm ideas for your visuals also helps at this point.

The device known as a "storyboard" will help you to develop your visuals. Storyboards can be used to develop slides, viewgraphs, charts, banners, handouts, etc. A storyboard begins as sheets of paper with nine or twelve blank squares. Each square is large enough to hold about eight to twelve lines of writing. In the margin next to each square, you will write notes identifying the one, two, or three points to emphasize in each visual. Limit each visual aid to just a few points.

In each storyboard square you will write the essence of each visual you will use. This essence will be the main idea you want the visual to convey. The visual does not have to be complete at this time, as the storyboard should contain only ideas. As you become accustomed to using this method, your storyboards will, more and more, look like the final visual.

One final note: use colored felt pens to do your storyboard. Draw your squares, write your main points and write your ideas, *each* in a different color. You can also use each visual storyboard square to mention the type of visual you might use, i.e., viewgraph, chart, chalkboard, flip chart, photographic slide, handout, etc.

FACTORS TO CONSIDER

Develop your audio-visual aids after you have developed your instructional objectives and content material.

Just as a house builder uses wood, concrete, and nails to help build a house, the presenter uses illustrations, examples, and visual materials to build a presentation. Trainers should not build their presentations haphazardly with visual materials simply thrown in to impress.

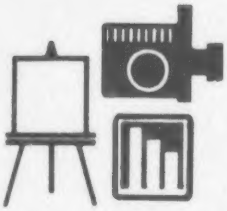
Frequently, instructors prefer viewgraphs (transparencies) to any other visual form. Except for the chalkboard, viewgraphs are the least expensive. They can be colorful and distinctive and are very simple to integrate into other instructional materials.

Your facility may have professionals who can help you make slides, computer photographs, plastic sleeves for handouts, micrographic materials, viewgraph materials, and copy materials in both color, white-on-black and black-on-white, and transparencies from slides and vice versa.

Realistically, we know that a number of important factors will determine what audio-visuals you will use:

1. The budget
2. The availability of material and equipment
3. The objective you expect to reach by using the audio-visual aid
4. The size of the audience
5. The size of the room
6. The portability of the aid

TYPES OF AUDIO-VISUAL AIDS



Most instructional aids can be placed in one of six broad categories: boards, projected aids, charts, models, audio, and handouts. The following discussion compares these easy-to-use audio-visual materials, their advantages, and disadvantages.

Boards

Many types of boards are available: chalk, flannel, magnetic, etc. The chief virtues of boards are their availability and cheapness. Chalkboards are most commonly used. The basic advantage to using a chalkboard is that it can be repeatedly erased and reused. It is also large and available for the on-the-spot comments generated by trainee involvement. You must write clearly on the board. If you want to put a lot of information on the chalkboard, arrive early and have it written before the class arrives.

Chalkboards have some disdvantages:

1. Instructors are apt to turn their backs to the audience for long periods of time.
2. Instructors write too much information on the board.
3. Sooner or later you have to erase.

Projected Aids

This category includes films, filmstrips, slides, transparencies, videotape, etc. These aids can bring realistic situations to the training session. Each specific aid in this category can be used extensively depending on the desired outcomes of your program.

Projected aids have some disadvantages:

1. They usually need to be shown in a darkened room.
2. Equipment, such as a projector and screen, may be bulky.
3. It may be difficult to update technical information on these media because changing them can be expensive and time-consuming.

Charts

Charts also add to an oral presentation. They are helpful when you need portable, permanent displays. Charts are frequently used when explaining the make-up, chain of command, etc., in an organization or any concept more clearly presented graphically.

Graphs are a type of chart. Line, bar, pie, or pictorial graphs all may be used to help trainees absorb data. The best graphs are simple, contain one or two ideas at most, are easy to see, and clarify oral information. Remember charts and graphs must be large enough to be read from all sections of the room.

Charts can be made of one or a combination of the following:

- Artwork
- Diagram
- Graph
- Drawings
- Visual descriptions
- Illustration showing numerical or quantitative relationships

Models

A model is a realistic copy of an actual piece of equipment. Models are not necessarily the same size as the equipment they represent, nor are they always workable. Models are especially useful for demonstrations in which trainees are encouraged to ask questions. They are very effective in explaining operational principles of various types of equipment, especially when the display is an operative model. When the instructor can point to each part of the model, explaining how it works in relation to the other parts, trainees can better understand the mechanical principles involved.

As instructional aids, models are usually more practical than the original item because they are lightweight and may be easily moved.

Audio

Grouped here are tape cassettes, reel-to-reel tapes, phonographs, and records. Audio equipment is generally easy to use, available, and relatively inexpensive. These aids allow the trainer to focus on the sense of hearing to help convey an instructional objective. Audio equipment can be used separately or with slides. Tapes are useful for play-back in self- and group evaluation.

Handouts

A handout is visual aid that is frequently abused by trainers. Like other audio-visuals, your handouts need to be planned in advance, visually attractive, clearly written to support your presentation, and appropriate for your audience.

Handouts can be vital to the success of a lesson. They may expand upon a point; present recent or complicated information; provide resources; present a diagram, graph, or formula; outline a proposal;

discuss opposing ideas or concepts; or provide learning exercises. In fact, a handout can very conveniently provide reinforcement for a major objective or your lesson plan. BUT THAT'S THE POINT. A handout must relate to an objective of your lesson plan to be worth the effort your trainees take to read it!

Here are some guidelines for using handouts effectively:

1. Design your handout to meet an objective of your lesson plan. For example, if you are discussing procedures for placing "copying" orders from your quick copy center your handout might offer a list of all copying services available at the center. No need to read the handout to the class; you simply want them to have a quick referral for resources.
2. Ask yourself, "Will this handout help teach or relay information I cannot present any other way? What do I expect the learner to do with this handout? How will I know the learner has internalized what I want? How will I evaluate the learning?" Remember, if you do not evaluate, why teach it at all?
3. Title your handout. Make sure your name is on it.
4. Type or print your handout. Leave adequate margins on all sides for notes.
5. Make sure you have a "clear" copy of your handout.
6. Double-check to make sure you have an adequate supply of copies.
7. Discuss your handout as it relates to your lecture. DO NOT READ IT.

A FINAL NOTE

When deciding to use visual materials to support your topic, idea, or a specific objective, do not be afraid to be creative. Use colored felt pens, colored poster board, colored photocopies, black-on-white or white-on-black slides, viewgraphs, etc. One last comment: one of the most persuasive audio-visuals is yourself. Politicians and actors are adept at capturing audience attention with their face, hand, or body movements. Move around; punctuate your speech with expressive facial expressions and hand movements. Keep in mind that rehearsal will aid you in using yourself as an effective audio-visual aid.

AUDIO-VISUAL AIDS

Course Guide

PURPOSE

Having defined instructional objectives, developed a training plan and selected the appropriate training methods for those objectives, you should include audio-visual aids that will communicate the major points you want trainees to learn. Audio-visual aids are very effective in maintaining both the interest and attention of the trainees. Well-constructed and presented aids also increase the trainee's retention of the key items in the instructional material.

MODULE OBJECTIVE

(As stated to trainees.) Upon completion of the module, you will be able to (1) name the six categories of audio-visual aids, (2) give an example from each category, and (3) demonstrate the use of at least one audio-visual aid.

TIME

One hour, 30 minutes

WHO

All occasional trainers responsible for developing or delivering training presentations.

TEXT AND REFERENCE MATERIAL

Instructor's Guide

Handouts

Instructor's Training, Teacher's Guide, by Consult, Ltd., can be borrowed from:

ETA Resource Clearinghouse
Room 8221
Patrick Henry Building
201 D Street, N.W.
Washington, D.C. 20213

EQUIPMENT AND SUPPLIES

Classroom
Flipchart
Pens
Chalkboards (2)
Flipcharts (2)
Overhead projector (4, if possible)

Prepared viewgraph slides (4)
Prepared charts (2)
Handouts

Optional:
- Slide projector (2)
- Sets of slides (2)
- 16-mm projector (2)
- 16-mm film, any topic
- Instruction cards for all electrical equipment
- Cassette tape recorders
- Tapes (2)

TRAINING METHODS

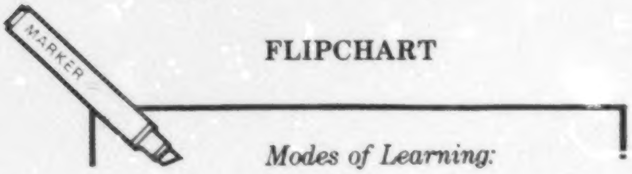
Lecture
Guided Discussion
Practice

DETAILED OUTLINE

A. Introduction to Type and Uses of Audio-Visual Aids—Illustrated Lecture (20 minutes) (See Instructor's Guide for background information.)

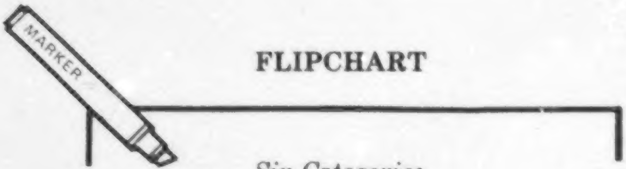
Key points:

1. Three learning modes used for acquiring information:
   - Visual, i.e., sight
   - Auditory, i.e., hearing
   - Kinesthetic, i.e., hand-eye coordination
2. Learning greatly enhanced by material in visual mode.
   - Three-fourth of all learning gained through sense of sight.
   - For oral presentations, visual aids are essential to increasing learning and retention.



FLIPCHART	**COMMENTS**
Modes of Learning: Visual Auditory Kinesthetic	Point out that visual aids increase retention of information Adult learners use all three modes, but visual is most important

3. Occasional trainers should use audio-visual aids to improve their presentations:
   - Six broad categories of audio-visual aids are boards, projected aids, charts, models, audio, and handouts.
   - Audio-visual aids help support a presentation or lecture.
   - Audio-visual aids should be related to the instructional objectives.



FLIPCHART	**COMMENTS**
Six Categories Boards Projected Aids Charts Models Audio Handouts	Point out the types of audio-visual aids in included within each category. Indicate the advantages and disadvantages of each aid. Have trainees understand importance of speaking to audience and not standing in front of audio-visual aid.

B. Types of Audio-Visual Aids. Lecture with Equipment Demonstration (20 minutes)

Key points:

1. Using Handout No. 1, Types of Audio-Visual Aids, and audio-visual equipment, discuss and demonstrate how to properly use audio-visual equipment.
2. Point out how to set up electrical equipment, how to turn on and run electrical equipment, where to place equipment in relation to audience, and where to stand in relation to equipment. Pass out Handout No. 2, The Presentation, to use as review.

C. Group Exercise (50 minutes)

1. This exercise will give trainees an opportunity to practice a short presentation including the use of audio-visual aids. The trainees will practice in small groups, taking turns as presenters and listeners/reviewers.
2. Ask trainees to divide into groups of four persons. Having placed the audio-visual equipment in learning areas, have the small groups meet in these areas.
3. Allow 5 to 10 minutes for trainees to plan what they will say and to familiarize themselves with the equipment they will use during their brief presentation. The goal of each presentation to the small group will be to use audio-visual aids in an effective manner. The role of the listeners will be to evaluate how well each speaker used the audio-visual equipment, using the included evaluation form, Handout No. 3.
4. Each group will choose one member to act as recorder. The recorder will summarize how audio-visual aids were used when the class reconvenes at the end of the exercise.
5. Each trainee will deliver a three to five minute presentation to the group using one or more audio-visual aids. The trainer will inform the groups when to start and facilitate the planning of presentations as needed.

D. Guided Discussion (15 minutes)

Reconvene class and explain that the next 15 minutes will be spent discussing what worked and what was learned during previous group exercise.

1. Ask the recorder of each group to summarize what was successful about the exercise and what preparation would be needed to improve the use of audio-visual equipment during a training session.
2. After all recorders have summarized, open the discussion to the whole class. Questions you may want to raise would be:
   - Which aids are the easiest to use?
   - Where can an occasional trainer go to get assistance in developing audio-visual aids?
   - Why is it necessary to vary the types of audio-visual aids used?
   - Are certain aids more appropriate in certain training situations?

TYPES OF AUDIO-VISUAL AIDS

1. **Chalkboard.** Everyone remembers what these are. No need to describe what they are here. The basic advantage to a chalkboard or whiteboard is its availability and repeated erasability. Either chalkboards or white porcelain boards can be used for on-the-spot comments generated by students.

   Several warnings about chalkboards, etc.:

   - Writing and talking smoothly at the same time can be difficult.
   - Avoid talking to the board
   - Write large and neatly or have someone do it for you.
   - Write on paper ahead of time what you will write on the board. It is difficult for the inexperienced to compose as they write at the chalkboard.
   - Try not to rely on chalkboards. Remember, sooner or later you have to erase and all is lost.

   WARNING, WARNING, WARNING

   When using white porcelain boards, remember to use "liquid chalk" felt pens only. Regular felt pen does not come off unless vigorously scrubbed with a cleaner that destroys the board.

2. **Flipchart.** This is usually an easel to which a large plain pad of paper is attached. To use this technique properly, have available many felt pens and masking tape. As you write, pages can be torn from the pad, saved, and taped with two pieces of masking tape to the wall.

   The warnings associated with a flipchart are similar to the chalkboard, plus an additional one. Present-day paper sometimes allows the felt tip ink to flow through the paper onto the page beneath or onto the wall!

   It does have advantages over the chalkboard:

   - The easel can be moved closer to the class.
   - You can write using many different colors.
   - Thoughts can be saved and taped to the wall.

   Flipcharts work well for brainstorming sessions.

3. **Viewgraphs.** Sometimes called overheads or transparencies, viewgraphs come in plain or colored sheets of plastic. Viewgraphs are clearer and more attractive if typed. Easily produced by running a typed sheet through a photocopier with plastic sheets in the paper tray. You can also write directly on plastic sheet, but you must be aware of handwriting and the size of lettering. A good rule of thumb is to put the viewgraph at your feet; if you can read it, the type is large enough.

   Several suggestions need to be made with regard to viewgraphs:

   - Practice using the overhead projector ahead of time.
   - Don't block the view of your viewgraph. Stand to the side of the screen.
   - Don't keep the viewgraph machine or overhead projector on for long periods of time. Turn it off when you are finished.

- Don't stand in the dark. We repeat: DO NOT STAND IN THE DARK. You can show viewgraphs in most rooms with the lights on.
- DO NOT READ your viewgraphs. Summarize or highlight them. Remember, properly prepared viewgraphs with large lettering can strengthen formal presentations.

4. **Videocassette tape players.** Videotape playback is usually quite easy to use. The TV monitor and tape player generally are connected by one major cord. They can be cumbersome to move around, so make sure you set up the equipment in advance. Place the learners' chairs in a semicircle around the TV set.

   Remember several hints:

   - Limit the audience to no more than 20 participants, unless you have more than one TV monitor. The screen size limits the size of the audience.
   - Check to make sure that you have the appropriate equipment for the tape you want to show. Videotape comes in 3/4", 1/2" VHS, and 1/2" Beta.

5. **Audio cassette players.** Audio playback equipment can include everything from record players to cassette tape recorders. Although audio is probably the least used of all audio-visual equipment,there are some ideas you may have forgotten:

   - For employee "well-ness" programs, there are many excellent record recordings.
   - Set up cassette tape recorders for several reasons:

     Some learners learn more slowly than others. After the training is over, they can listen to the tapes again. Note: If you have a variable speed recorder, the listener can slow down or speed up the speech without distortion.

     Tape recordings can also provide feedback to your trainers as to how well they did.

6. **Handouts.** Prepare supplementary handouts as carefully as you would prepare any other visual aid. They should be titled, numbered, and *easy* to read. Here are some suggestions regarding handouts:

   - Distribute handouts in such a way as to not detract from the presentation. At times, you may need to distribute handouts so that participants can write notes on them. Other times you may want to distribute handouts as a supplement, and therefore at the end of your presentation.
   - Write handouts with an objective in mind. Do not distribute handouts "just in case" they might be interesting.

One final hint: consult co-workers regarding the audio-visual aids you intend to use. They can give you ideas, make recommendations, and advise you concerning the usefulness of your aids. Also, *try out all* equipment before class. Make sure it works!

THE PRESENTATION

In our efforts to prepare visuals, we need to remember that someday those visuals will be used in a presentation. Beautiful visuals used improperly can create a frustrating experience for the participant and the speaker.

DO'S AND DON'TS

Here are a few rules to live by:

1. Do not use anything that cannot be clearly seen.
2. DO NOT stand in the dark and talk after you have already explained your viewgraph, slide, etc.
3. Do not stand in front of visual or with your back to your audience.
4. Highlight your visual; do not read the whole thing.
5. Do have your visual set up and ready to use.

STOP! REREAD THESE!

Audio-Visual Aids
Handout No. 3
page 1 of 1

VISUAL AIDS/EQUIPMENT EVALUATION FORM

NAME OF SPEAKER: ______________________________

AUDIO-VISUAL AID(S) USED: ______________________________

1. You maintained eye contact with the audience by looking at first one person, then another.

Excellent, what can I say?	Very good, maybe a few weak points	OK, but needs improvement	Work on it, You'll do better
5	4	3	2

2. You talked to the audience not to the aid/equipment.

Excellent, what can I say?	Very good, maybe a few weak points	OK, but needs improvement	Work on it, You'll do better
5	4	3	2

3. You stood out of the way of the aid/equipment so people could see.

Excellent, what can I say?	Very good, maybe a few weak points	OK, but needs improvement	Work on it, You'll do better
5	4	3	2

4. You used the aid/equipment for the benefit of the trainee, not yourself.

Excellent, what can I say?	Very good, maybe a few weak points	OK, but needs improvement	Work on it, You'll do better
5	4	3	2

5. Other comments:

EVALUATION

The training has been presented. The trainees have returned to their work assignments. It's over, right? Wrong! There is an important question to be asked and answered: "Did the learners learn?" Until this question is answered, you cannot know how effective the training was. The process of answering this question is known as evaluation.

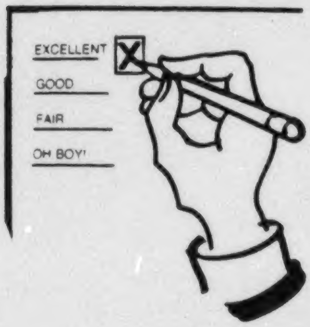
Trainers find themselves continually evaluating trainees. The evaluation may be the observation of a performance task. It may be listening to trainee comments during a guided discussion. It may be an elaborate simulation of a real-life situation or the simple questioning of a single trainee. Evaluation provides an incentive for learning. Trainers evaluate to see how trainees are progressing and to decide if certain aspects of the training need improvement.

WHAT IS EVALUATION

Training evaluation is the systematic process of assessing whether instructional objectives are being met. Evaluation—measuring the outcome against the intended or expected results—is a vital element of training. Once training begins, evaluation is continually needed to determine both what and how well the trainees learned. The trainer should evaluate the trainee against what is to be learned or against the job to be done. Evaluation during training does not require competition between the trainees.

> Evaluation not only helps to determine the trainees' progress, it provides the information needed to determine the effectiveness of the training. Training evaluation helps the trainer monitor the program, to improve specific parts. For this reason, it should be done by the instructor. Even if it is done informally, evaluation must be done.

Feedback from trainees is an unstructured form of evaluation. Feedback provides the information an instructor must have to respond to the specific needs of the trainees. Feedback received from the trainees needs to be met with flexibility, sensitivity, and attention. To receive feedback from the trainees, you should encourage questions during the training session, especially during practical application activities.



Feedback can be *formative* or *summative*. Formative feedback is received during a presentation and may have a direct impact on the remainder of the presentation. The instructor uses formative feedback to identify those areas of the presentation which need further clarification or explanation. Questions are asked by the trainee and answers are given by the instructor. This prevents the trainee from becoming lost during the presentation. It also prevents the trainee from becoming frustrated. Summative feedback is the assessment made by the trainees of the completed training experience. This form of feedback will be covered in more detail under "Reaction Evaluation" below.

TYPES OF EVALUATION

Having briefly explained evaluation and feedback, let us discuss the four areas in which a training program should be evaluated:

1. *Reaction* of the trainees is their judgment of the training program.
2. *Learning* measures the level of learning reached by the trainees.
3. *Behavior modification* measures the changes in on-the-job behavior which can be attributed to the training.
4. *Results* are the effect the training has on job performance problems. Results are the organizational payoff.

For our purposes we will discuss reaction and learning and just touch upon behavior modification and results.

Reaction Evaluation

Reaction evaluation allows the trainees to express their opinions about the training program.

Reaction evaluation includes summative feedback. Trainee feedback lets you know those areas of frustration or satisfaction of which you were unaware. The trainees indicate how well they liked the training as a total, completed program, how worthwhile it was for them, and what they believe they gained from it. Remember that *reaction is a measure of the trainees' feelings, not the learning achieved.*

Information gained from the reaction evaluation is very valuable. You can determine how the overall design, methods, and content were received by the trainees. This evaluation will show where improvements may be needed and what went well during the training.

> The most frequently used approach for gathering trainee reaction is a questionnaire or a comment sheet. Determine what areas of the training should be evaluated and incorporate them in the questionnaire.

Questions can deal with several topics:

1. The methods used, which were best and which were ineffective
2. The usefulness or value of the subject matter to job performance
3. The level of the instruction, too easy/too difficult
4. The amount of time allowed for the training
5. The types of training materials used
6. Recommended changes

Space for comments should be included in the questionnaire so that the trainees can address any areas of concern that were not part of the form.

Trainee reaction is the first information gathered in the evaluation process because it is the easiest to ascertain. Reaction determines how the trainees feel about the training program. The more the trainees are able to enjoy (have positive feelings about) the training, the more they can benefit from it. Reaction questionnaires will supply this information of positive and negative feelings so improvements can be made where needed.

Learning Evaluation

It is necessary to determine what principles, facts, and techniques were understood by the trainees in order to evaluate the learning which took place.

Learning evaluation is more difficult to measure. As the trainer, you can often observe the trainees' progress toward course objectives in guided discussions, practical exercises, and tests. Yet you must still plan learning evaluation before the last training session. The starting point for all learning evaluation is the instructional objectives. Remember, instructional objectives give defined goals for the training. These goals include how the trainee will be evaluated. For example, "the trainee will construct a wall, given the necessary materials and tools, so the wall meets specifications and passes inspection and is completed during one training session." This form of learning evaluation is built into the instructional objectives and therefore the training program as well. Learning evaluation measures whether the trainees have reached the instructional objectives by the end of the training program.

In a physical or technical skills training program, it is relatively easy to evaluate the learning achieved. The instructional objectives are in definite terms indicating what the trainees must do to demonstrate they have learned what they were expected to learn. The learning is evaluated by a successful demonstration or individual performance of the skill. Where skills of some kind are being taught, systematic evaluation, which measures the learning, should be ongoing so that the instructor can monitor the trainees' progress and correct any mistakes before they become habits.

Paper and pencil tests are useful for knowledge-based skills.

Knowledge-based skills (learning of principles and facts), such as those necessary for some types of technical training, are more difficult to measure. Paper and pencil tests will be required for this evaluation. These tests should be designed by the individual instructor. However, what is going to be tested should be spelled out in the instructional objectives and made clear to the trainees.

Supervisory and safety training have their own set of problems for learning evaluation, since attitudes are very difficult to test. However, the trainees must still be responsible for learning. Attitude learning is helped by making instructional objectives as specific as possible. You can evaluate trainee understanding of theory and of recommended procedures and practices with written tests. Evaluation of trainee application generally relies on an assessment by the trainer of the attitudes and judgments demonstrated by the trainees.

Behavior Modification and Results

Behavior modification and the results of training on job performance are ultimately the responsibility of the people in supervision and management. These two areas are seen back on the job after the training is complete. Follow-up will indicate to what degree the training was successful in improving job performance. Improvement should be the elimination of the problem which management felt required the initiation of training. Where practical, the trainer can follow up on these areas of evaluation with questions directed to the trainees' supervisor as to how the trainees have applied the training received. But this would not be the trainer's direct responsibility unless he or she is also a supervisor or manager.

EVALUATION METHODS

Learning evaluation is obviously more difficult to assess than reaction evaluation. Learning evaluation must begin with the instructional objectives and continue throughout the training. The following methods of evaluation can be used to measure learning:

- *Oral questions.* Use as a spot check of the trainees' understanding of the information as it is taught. This is an informal method of evaluation and provides immediate feedback of information.
- *Performance tests.* Use to measure the trainees' ability to demonstrate the successful completion of all or part of a procedure or physical skill. This is a formal method of evaluation and provides immediate feedback of information.
- *Written tests.* Use to measure knowledge skills (understanding of principles, procedures, and facts) and for attitudinal skills. This is a formal method of evaluation and provides delayed feedback.
- *Observation of trainee work.* Use when practical application by the trainee is the objective and when time and conditions allow the instructor to observe trainees on the job. This is an informal method of evaluation and provides immediate feedback.

Whatever form of learning evaluation you use—oral questions, written tests, performance tests, or observation—be sure to evaluate only the *needed and meaningful points* of the learning necessary for successful job performance, thus meeting the instructional objectives. Test the trainees against the job, not against each other.

Performance Tests.

Performance tests are useful for measuring how well trainees can perform a task.

A performance test measures how well trainees can do a task. It is most commonly used in measuring performance of manual tasks. Trainees are required to make, service, repair, operate, shape, assemble, or disassemble something, and are checked on their speed, quality of work, and the following of procedures. Performance tests measure manual skills and the ability to apply knowledge in manipulative tasks.

Performance tests have several advantages:

1. They provide the trainer with a means of checking trainee performance against the stated instructional objectives.
2. They provide the most direct means of determining whether trainees can actually do a physical task and do it well. (A trainee may pass a written test on specifications for published reports, but commit several errors while actually carrying out the task.)
3. Performance tests reveal better than any other type of test specific difficulties that trainees encounter when doing a job.
4. They provide the only effective way of revealing whether trainees have mastered various enabling objectives, for example:
    - Handle tools effectively.
    - Observe all necessary safety precautions.
    - Carry out the operations in the correct order or sequence.
    - Can operate under pressure.
    - Properly care for materials and equipment.

But performance tests also have limitations:

1. They require careful analysis of lesson objectives in its construction, thorough planning, and adequate personnel and equipment support.
2. Considerable time may be needed to administer the test. (One instructor is usually required to check one trainee at a time; in some cases, however, he may check from two to five.)
3. There is a problem of making profitable use of the time of trainees who are waiting their turn or who have finished. This can be solved in some cases by arranging a number of stations and rotating students through them. Another solution is to provide concurrent training activities for trainees awaiting their turn.
4. In some cases the formality of the test tends to penalize the trainee who experiences difficulty when he works under pressure. (If the trainee's job is done under pressure, then the testing should be as close to the real thing as possible.)

Construction of Performance Tests

The following procedures and suggestions should be followed in preparing performance tests:

1. Select the lesson objectives that should be measured by some form of performance test.
    - Select operations that require the trainee to do something that has been taught.
    - Select operations that are sufficiently difficult to reveal differences in achievement. Do not choose operations that are too simple.

- Select operations that involve definite steps of procedure and require definite knowledge and abilities.
- Select operations that can be performed in a relatively short time, no more than 10 to 15 minutes.

2. Determine what the step-by-step procedures are.
3. Design an appropriate task in which the objectives are specifically applied.
4. Construct a checklist.
5. Prepare a set of directions and instructions to be followed by the trainee, including (a) the purpose of the test, (b) exactly what the trainee is to do in the test, and (c) major factors to consider in the successful completion of the test.
6. Dry run the test. This is a must for a performance test.

Written Tests

Written tests are difficult to construct but are useful in measuring knowledge, mental skills, and application of information.

A written test is a valuable tool in the learning process. Its purpose is to help the trainer determine what the trainee has learned. Written tests can be used at any point in the training program. They aid in measuring the amount of information that has been retained and how well the trainee can apply the information. Written tests can measure knowledge, mental skills, and abilities. Because written tests can only indirectly measure manipulative skills, performance tests are better indicators of such skills.

Written tests serve a number of purposes, including these four important ones:

1. They emphasize important points and can be used to review or summarize the facts, principles, or procedures that trainees need to know.
2. They indicate the areas of weakness in the trainee's knowledge.
3. They indicate weaknesses in the instruction, locating those areas of instruction that need to be reviewed or retaught by another method.
4. Written tests often encourage trainees to feel more responsible for the learning to be achieved.

If you need to develop a test, decide what skill or knowledge the trainees must know to meet the instructional objective. Write the test questions so that those skills and/or knowledge areas are tested. The largest number of questions should be aimed at the most important segments of the topic presented.

Types of Written Tests

You have chosen the material to be tested. The next question to be answered is what type of test should be used. Several choices are available to you:

1. *True/false* measures memory more than application. Test items consist of a single statement that is completely true or false. Make half the questions true and the other half false, being careful to randomly mix them so no pattern exists to indicate a correct response.
2. *Completion* measures recall of exact words, symbols, or facts. It is excellent for technical terms or specifications. Test items consist of a true statement with one or two specific words or terms omitted and indicated by blank spaces to be filled in by the trainee. Omit only the word(s) that test a trainees knowledge of specific content learned.
3. *Multiple choice* measures the trainee's knowledge of facts. It is a good test for discriminating among several possible alternatives, but a difficult test to construct. Each item should have at least four responses, none of which should be obviously wrong.
4. *Identification* measures the trainee's knowledge of names of tools, supplies, parts of equipment, etc. Test items may be a drawing, picture, or actual piece of equipment to be identified by the student with the proper label.
5. *Matching* measures a trainee's ability to discriminate between two columns of related information. The trainee must correctly match items from two columns of names, symbols, or illustrations.
6. *Short answer essay* measures a trainee's generalized understanding of a topic. This type of test is more time-consuming and more difficult to score; but is excellent for evaluating troubleshooting abilities. It requires an explanation of the process/procedures to be followed.

Written tests are valuable and sometimes necessary measuring tools. They can help both the trainee and the instructor by indicating where the trainee needs extra training time and where learning has occurred. To serve this function a written test must be properly developed and implemented:

1. It must measure exactly what it is supposed to measure as defined by the instructional objective.
2. Scoring must be impartial.
3. A written test must measure all instructional objectives or as many as possible.
4. Scored, it should reveal significant differences among the levels of achievement of the trainees.

Written tests are valuable, but difficult to write. When possible, a performance test should be chosen for evaluating successful completion of a training segment. Keep in mind that with performance or written tests the trainees should benefit from the experience. This means the trainees should gain information that tells them what knowledge, skills, abilities, and attitudes have been retained. Any areas that need reinforcement should also be apparent. A test should never be presented with the idea of failure being the end result. Training is to advance job performance not injure self-concept.

SUMMARY

Evaluation is necessary for many reasons:

- To judge the effectiveness of the training
- To determine if instructional objectives have been met
- To increase the learning of the trainees
- To monitor the program to improve specific parts
- To help determine trainee progress
- To receive feedback from the trainees
- To involve the trainer, and trainees in the training process.

It is important to remember that evaluation is an ongoing process. The trainer is constantly involved in evaluating the training, learning, and trainees. The methods used to accomplish this are determined by the objectives and the types of skill, knowledge, or attitudes being taught. A trainer must be consistent in his or her approach to evaluation and must let the trainees know how they will be evaluated from the beginning of the training. Checklists are very beneficial to both the trainer and the trainee for clarity, impartiality, and consistency. The trainer and the trainee should both know what is to be evaluated.

EVALUATION
Course Guide

PURPOSE

A frequent shortcoming of training programs is to overlook the importance of evaluation. Evaluation is a systematic process assessing whether instructional objectives are being met. Evaluation is an ongoing process which helps to measure what and how well the trainees learned, as well as what areas of the training need improvement.

MODULE OBJECTIVE

(As stated to trainees.) Upon completion of the module, you will be able to (1) list four methods of evaluation and when to use each, (2) write a reaction questionnaire covering the seven suggested areas, (3) construct a performance test (optional), and (4) identify the types of written tests.

TIME

Two hours, 15 minutes

WHO

All occasional trainers responsible for developing or delivering training presentations.

TEXT AND REFERENCE MATERIAL

Instructor's Guide

Handouts

W. R. Miller, and Homer C. Rose, *Instructors and Their Jobs* (American Technical Society, 1975)

Robert L. Craig, ed., *Training and Development Handbook* (New York: McGraw-Hill, 1979).

EQUIPMENT AND SUPPLIES

Classroom

Chalkboard

Flipchart

Pens

Handouts

TRAINING METHODS

Lecture

Guided Discussion

Small Group Exercise

DETAILED OUTLINE

A. **Introduction to Evaluation—Illustrated Lecture** (15 minutes) (See Instructor's Guide for background information.)

Key points:

1. Tendency to overlook need for evaluation:
   - Important question to be asked and answered "Did the learners learn?"
   - Evaluation process helps to answer this question.
   - Evaluation is an ongoing process throughout the training program.
   - Evaluation provides needed information to judge effectiveness of training, decide how trainees are progressing, and determine what areas of training need improvement.
2. Definition of evaluation:
   - Systematic process of assessing whether instructional objectives have been met.
   - Measures the outcome of the training against the intended or expected results. Remember an instructional objective includes a criterion of performance, which becomes the evaluation standard.

FLIPCHART	**COMMENTS**
Evaluation answers the question: "Did the learners learn?"	Point out importance of evaluation being an ongoing process which does not occur at the end of the training program only
Definition: Systematic process of assessing whether instructional objectives have been met.	Give examples of ongoing evaluation done by a trainer (i.e., questions asked during a presentation, successful completion by a trainee of a performance task)

3. Feedback is an unstructured form of evaluation:
   - Provides information necessary for training to be responsive to the specific needs of the trainees.
   - Two types of feedback, formative and summative.

FLIPCHART	**COMMENTS**
Feedback is an unstructured form of evaluation: 1. Formative 2. Summative	Explain the difference between formative and summative feedback. Have trainees discuss how a trainer would use feedback during a training session.

B. Four Types of Evaluation in a Training Program

Four types of evaluation may be used in a training program:

1. Reaction evaluation
2. Learning evaluation
3. Behavior modification
4. End results

Trainers are responsible for the first two forms of evaluation, management is responsible for follow-up necessary for last two. Behavior modification and end results are evidenced on the job.

1. *Reaction Evaluation—Lecture* (20 minutes) (See Instructor's Guide for background information.)
   - Indicates the reaction of the trainees to the completed training program
   - Is not a measure of the learning achieved by the trainees
   - Is a first step in the evaluation process and easiest to obtain by questionnaire
   - Indicates which aspects of the training worked and to what degree
   - Indicates areas of instruction which need improvement from the viewpoint of trainees
   - Explain areas to be covered in a reaction questionnaire

FLIPCHART	COMMENTS
Reaction Evaluation Definition: Areas covered by reaction questionnaire: 1. Methods used 2. Value of subject matter to 3. Level of instruction 4. Time allowed for training 5. Types of training materials used 6. Recommended changes 7. Comments	Have trainees keep in mind that a reaction questionnaire is to be viewed from the standpoint of the trainee (the receiver of the training).

Group Exercise (15 minutes)

Give Handout No. 1, Reaction Questionnaire, to trainees. Have the trainees discuss the value of trainee reaction to a training program and to the trainer. Using the Sample Reaction Questionnaire, have trainees critique it for covering areas previously suggested and ask for improvements in coverage.

Group Exercise (15 minutes)

As a follow-up to the exercise above, using the flipchart, have the class construct a reaction questionnaire to be used at the end of a training program (or session) they would have instructed. Be sure it covers areas previously covered.

2. *Learning Evaluation—Illustrated Lecture* (10 minutes)

- Learning evaluation measures the level of learning reached by the trainees.
- The level of learning is more difficult to measure than reaction.
- What facts, principles, procedures, skills were learned by trainees during the training session?
- Learning evaluation is based on instructional objectives that provide the measurable standards which the trainees must meet.
- Skill training is easy to evaluate because it is performance-based and ongoing.
- Knowledge-based skills can be evaluated with written tests, but tests must still be geared to clearly stated objectives and ongoing needs.

- There are four types of learning evaluation:
  1. Oral questions
  2. Written tests
  3. Performance tests
  4. Observation of trainee work

Guided Discussion (10 minutes)

Ask the class to give examples of situations when they deliver training. Respond with how the four types of learning evaluation could be used to evaluate the knowledge gained through the training. Present other situations to the participants and ask them how the types of learning evaluation could be used.

FLIPCHART	**COMMENTS**
Learning Evaluation Definition: The measurement of the level of learning reached by trainees at the end of training throughout a training session	Point out importance of learning evaluation as ongoing process beginning with the instructional objectives. Goals are pre-set for trainer and trainee.
Four types of learning evaluation: 1. Oral questions 2. Written tests 3. Performance tests 4. Observation of trainee work	Measures what learning has taken place. Handout No. 2, Performance Tests Handout No. 3, Construction of Performance Tests

C. Types of Tests

1. *Performance Tests—Lecture* (5 minutes)

Performance tests measure how well trainers can do or perform a task. They measure manual skills and ability to apply knowledge in manipulative tasks.

Guided Discussion (10 minutes)

Have trainees discuss advantages and disadvantages of performance tests with aid of Handout No. 2, Performance Tests.

FLIPCHART	**COMMENTS**
Performance Tests Advantages:	
1. Can trainee do physical task well?	Trainee may pass a written test, but not be able to do task well.
2. What difficulties trainees will encounter doing a job?	Trainee recognizes where difficulties are for him/her.
3. What skill and attitude areas need further emphasis?	Safety precautions met, handle pressure of task, care for tools and equipment

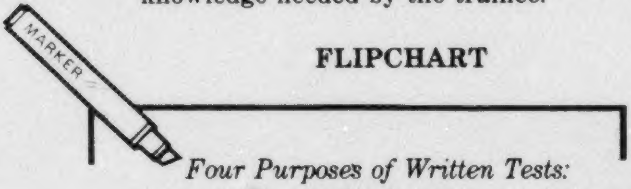
Group Exercise (15 minutes)

Using the handout on "Construction of Performance Tests" and the flipchart, have the class construct a performance test on a typical task for which they might provide instruction. As an example, entry-level maintenance workers might use a performance test for the replacement of a washer in a leaky faucet. If individual class members do not provide instruction in similar areas, then this exercise should be conducted in groups of three or four.

FLIPCHART	**COMMENTS**
Performance Test for Replacement of Washer	Have trainees determine when a performance test would be useful in their job areas. Some trainees may not be able to use performance tests, have them discuss why not. Write out the steps trainees decide upon on the flipchart. Discuss the selection of steps as to proper order. Have trainees construct the checklist and set the directions for the performance test.

2. *Written Tests—Illustrated Lecture and Handout* (15 minutes)

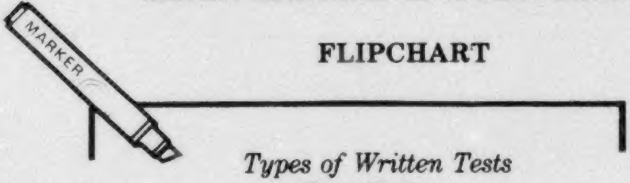
- Written tests can measure amount of information retained by the trainee.
- Written tests can be used at any point in the training session.
- Written tests measure knowledge and mental skills.
- Manipulative skills should be measured with performance tests.
- Test questions should match instructional objectives and test only the skills and knowledge needed by the trainee.



FLIPCHART	COMMENTS
Four Purposes of Written Tests:	
1. Emphasize important points.	Useful for review and summary of facts, principles, and procedures.
2. Identify weaknesses in trainees' knowledge.	Indicate where trainees need more training in order to meet instructional objectives.
3. Identify weaknesses in instruction.	Indicate where instruction has been insufficient to meet instructional objectives.
4. Cause trainee to feel responsible for learning.	Trainee should feel responsible for learning to be achieved if training content is to be retained.

Warn occasional trainers that test construction is not easy. A test must:

- Measure exactly what is defined by the instructional objective.
- Be scored impartially.
- Measure the instructional objectives.
- Indicate different levels of achievement among trainees.



FLIPCHART	COMMENTS
Types of Written Tests	Written tests measure trainees':
1. True/False	•Memory more than application
2. Completion	•Recall (words, symbols, facts)
3. Multiple Choice	•Knowledge of facts
4. Identification	•Knowledge of names (tools, supplies, etc.
5. Matching	•Ability to discriminate
6. Short Answer Essay	•Generalized understanding of a topic

Group Exercise (optional) (15 minutes)

Have group use Handout No. 4 and indicate what areas of training would match each type of written test, giving examples (for example, True/False, clerical guidelines found in a manual for correct style).

REACTION QUESTIONNAIRE

The purposes of this activity are to:

1. Provide an opportunity to review the training session.
2. Give the instructor some idea about what was helpful and what was not.
3. Give you an opportunity to comment on needed changes in format.

Answer all questions.

List three ideas or concepts presented today which were most helpful for you.

Describe how you intend to apply "on-the-job" each helpful concept or idea. Be specific.

List the techniques or activities used in today's sessions which best helped you to understand the material.

Give your reasons.

List the concepts, techniques, or activities which were not helpful.

Give your reasons for seeing it as not helpful.

Use the rest of this sheet for any further comments you care to make.

Evaluation
Handout No. 2
page 1 of 1

PERFORMANCE TESTS

A performance test measures how well trainees can do or perform a task. It is most commonly used to measure performance of manual tasks. Trainees are required to make, service, repair, operate, shape, assemble, or disassemble something, and are checked on their speed, quality of work, and the following of procedures. Performance tests measure manual skills and ability to apply knowledge in manipulative tasks.

Performance tests have several advantages:

1. They provide the most direct means of determining whether trainees can actually do a physical task and do it well.
2. They reveal better than any other type of test specific difficulties that trainees encounter when doing a job.
3. They provide the only effective way of revealing whether trainees:
    - Handle tools effectively.
    - Observe all necessary safety precautions.
    - Carry out the operations in the correct order or sequence.
    - Can operate under pressure.
    - Properly care for materials and equipment.

Performance tests also have disadvantages:

1. The performance test requires careful analysis of lesson objectives in its construction, thorough planning, and adequate personnel and equipment support.
2. Administration of the test requires considerable time. Requires instructor to check one to five trainees at a time.
3. There is a problem of making profitable use of the time by trainees who are waiting their turn or who have finished.
4. In some cases the formality of the test tends to penalize the trainee who experiences difficulty when he works under pressure.

CONSTRUCTION OF PERFORMANCE TESTS

The following procedures and suggestions should be followed in the preparation of performance tests:

1. Select the lesson objectives that should be measured by some form of performance test:
    - Select operations that require the trainee to do something that has been taught.
    - Select operations that are sufficiently difficult to reveal differences in achievement. Do not choose operations that are too simple.
    - Select operations that involve definite steps of procedure and require definite knowledge and abilities.
    - Select operations that can be performed in a relatively short time, no more than 10 to 15 minutes.
2. Determine what the step-by-step procedures are.
3. Design an appropriate task in which the objectives are specifically applied.
4. Construct a checklist.
5. Prepare a set of directions and instructions to be followed by the trainee, including:
    - Purpose of the test
    - Exactly what the trainee is to do in the test.
    - Major factors considered in the successful completion of the test.
6. Dry run the test. This is a must for a performance test.

TYPES OF WRITTEN TESTS

1. **True/false** measures memory more than application. Test items consist of a single statement which is completely true or false. Make half the questions used true and the other half false, being careful to randomly mix the order so no pattern exists to indicate a correct response.
2. **Completion** measures recall of exact words, symbols, or facts. It is excellent for technical terms or specifications. Test items consist of a true statement with one or two specific words or terms omitted and indicated by blank spaces to be filled in by the trainee. Omit only the word(s) that test a trainees knowledge of specific content learned.
3. **Multiple choice** measures the trainee's knowledge of facts and ability to discriminate between several possible alternatives. This is a difficult test to construct. Each item should have at least four responses, none of which should be obviously wrong.
4. **Identification** measures the trainee's knowledge of names of tools, supplies, parts of equipment, etc. Test items are a drawing, picture, or actual piece of equipment to be identified by the student with the proper label.
5. **Matching** measures a trainee's ability to discriminate between two columns of related information. The trainee must correctly match items from two columns of names, symbols, or illustrations.
6. **Short answer essay** measures a trainee's generalized understanding of a topic. This type of test is more time-consuming to take and more difficult to score than other types of written tests.

GROUP DYNAMICS

Each group you face as a trainer develops a specific identity, evolves through different stages, and contains individual members who play defineable roles. It is important for the trainer, especially the occasional trainer, to understand that the changes in the mood, level, and type of participation by group members are natural developments and to be expected. This process is known as group dynamics. This section describes the stages that most groups pass through and the various roles that the trainer and trainees play.

GROUP STAGES AND ROLES

People in groups generally behave differently from the way they behave alone or with just one other person. Generally, the less the members of a group know one another, the more different their feelings and behavior will be from their private ones. Most of us have a style of talking with a group of strangers that differs from our style with just one new acquaintance. Our differences in behavior and feeling are not confined to conversations only. Think of the last time you silently sweated through an elevator ride with six strangers.

Social scientists have studied small groups extensively and have documented the fact that these groups tend to move through certain characteristic and predictable stages. At each stage, certain behaviors occur. They have also observed that certain roles or functions are often are assumed or played out by members in a group. If trainers are aware of these behaviors of groups and the typical roles which are played by members of a group, they are in a better position to direct the group in ways that will achieve the training objectives.

Group Stages

There are many theories of group development (i.e., of the stages through which groups move and of the characteristics or issues that typically dominate each stage). One model, developed by Ruston, can be described as a complex three-stage model: (1) orientation stage, (2) integration stage (conflict/cohesiveness), and (3) work stage. The first stage is concerned with inclusion needs. The second stage deals with control—who has power and how is it shared. The third stage finds the group dealing with the level of trust between members. The group characteristics to be discussed may occur at any of the stages but generally occur as indicated.

An occasional trainer is better equipped to do an effective job of training if he or she is aware of the stages through which a group passes and the roles played by the individual group members.

Stage One: Orientation

A sizing up or assessment process takes place at the beginning of a group. Individuals will be concerned with whether they can depend on the trainer and whether the training experience will satisfy their individual needs and goals. "Will I get the knowledge, skill, and experience in this session that I want?"

Group members will be concerned with the group norms, (e.g., what behavior is considered acceptable by the trainer and by the other trainees). "Can I be expressive and animated in this group or must I just speak quietly and deliberately?" Will this be a monologue by the trainer or a series of dialogues between the trainer and individuals or a verbal free-for-all? Can the trainees use humor and if so, what kind?

Stage Two: Integration

At this stage, the group begins to deal with leadership issues. How will the trainer lead, autocratically or democratically? Is the trainer really the leader of the session? How much of a leadership role can class members assume vis-à-vis the trainer and each other? Related to this, of course, are power issues. "How much power do I as a member bring with me by virtue of my job status, my knowledge of the subject matter, or my verbal and analytical skills?" "How much power will others and the trainer attribute to me and how much will I attribute to them?" Sorting out these issues and the leadership and power relationships in the class will engender conflict and at times open confrontation with the trainer or other trainees.

In many small groups lasting a day or longer, some of these issues will arise and must reach a degree of resolution for group cohesiveness to develop. As they are resolved, cohesiveness increases:

1. The group will express a great deal of solidarity. Members will comment, for example, "We did a good job on that."
2. The members will actively defend the sense of solidarity from internal threats (e.g., disruptive conflict) or external threats.
3. Members will assist each other in ways they perceive as needed and will actively play out various roles in the group.
4. Members will strongly defend the group norms that have been established and will not allow them to be broken or changed.

Stage Three: Work Stage

If a group develops to this point, a significant level of trust has developed between group members. This trust makes possible the self-disclosure and feedback that characterize the third stage. Self-disclosure refers to an individual sharing information about himself or herself. Furthermore, this information is the kind of information that a person would not share with everyone, for example, "I am having a problem with one of my key employees." Feedback refers to the process of sharing with another person how one thinks, feels, and behaves with respect to some perceived aspect of the other person, such as, "When you made that last statement, you sounded really angry with your employee." This last stage of group development optimizes the possibility of effective feedback, feedback that the individual can genuinely "hear" and act upon.

Group Member Roles

Maintenance Roles
Task Roles
Combined Roles
Nongroup Roles

Group member roles can be categorized into four broad types of activities or ways of behaving that help a group accomplish its goals. One broad category helps a collection of individuals become, continue, and grow as a group. These are "maintenance roles" and include such behaviors as:

- *Encouraging*, or keeping motivation by commending others' contribution.
- *Gatekeeping*, or ensuring that everyone has a chance to contribute.

- *Harmonizing,* or mediating others' differences by listening and expressing group feelings.

Another category, that of task roles, helps the group accomplish its training tasks:

- *Seeking information,* for input or clarification of the task.
- *Giving information,* offering facts or background on issues.
- *Summarizing,* i.e., pulling things together, recapping, adding perspective.
- *Testing workability,* or seeking consensus.

A third category contributes to both the task and maintenance dimensions of a group. These combined roles include:

- *Evaluating,* or assessing the usefulness of input made by group members.
- *Diagnosing,* or finding which areas of a task are in need of attention.
- *Testing for consensus,* or surveying members to determine areas of agreement.
- *Mediating,* or intervening when conflicts arise to resolve conflict.
- *Relieving tension,* or helping the group to work through difficult times of conflict.

A fourth general type of activities includes those roles defined as "nongroup roles." These are attention-getting devices that hinder accomplishment of tasks and typically include the following:

- *Dominator* interrupts, gives excessive advice.
- *Blocker* makes judgmental comments, lacks toleration of individual differences.
- *Avoider* does not deal with the present situation, changes the subject, doesn't follow through on assignments.

IMPLICATIONS OF GROUP DYNAMICS FOR EFFECTIVE DESIGN

The main implication of group dynamics for effective design of training is that knowledge of group stages and of roles in a group allows the trainer to mesh group dynamics with attainment of the instructional objectives. There are two main points to be made: first, small-group dynamics provide limits that a trainer cannot really change. If the trainer understands these limits, he or she can avoid risky or disastrous activities and is less likely to be "surprised" by unanticipated developments. Second, knowledge about small-group dynamics can help the trainer plan more effectively, to exercise "control" over what will occur.

For example, the trainer cannot escape, at the beginning of a group session, the characteristics of stage one. The use of "icebreakers" or other activities to open a session is not an accident but is designed to relieve trainee anxiety. (The trainer is also nervous in the initial stage of a group and wants to know how he will be received by the group just as much as other members of the group are concerned about their relationship to him and to each other.) In the first stage, ground rules are being formed, and the instructor's role is critical here. Since group cohesiveness has not been established, to run a high-risk role-playing exercise at the inception of a group is dangerous. If someone is perceived as having been badly "burned" at the beginning of a group, the entire training session can be damaged.

In a daylong session some group members will challenge the trainer and each other (leadership issues of stage two). The trainer should also expect some conflict in a daylong session. These events and others like them will occur and must be expected and planned around. How the trainer diagnoses and handles the first and second stages will determine how the group will communicate.

A training group may not display all the characteristics of each of the stages that a "mature," working group will have displayed as it progressed to its mature level of functioning. In fact, most training sessions will not reach the final stage of maturity; they are too short, dominated by lecture, or technical in content, etc. However, a two-hour session provides ample time for the first stage characteristics to emerge, and a daylong session will ordinarily find a group manifesting stage one and two behaviors.

Points to remember: GROUP MEMBER ROLES

1. Any member of the group can play several roles, depending upon the circumstances.
2. Non-group role behavior isn't always "bad."
    - It means someone's needs aren't being met.
    - Someone may simply be saying, "Stop and let me make my point!"
    - Dealing with non-group behavior can encourage group to grow.
3. To get the job done, the group needs *both* task and maintenance role behavior.
4. As trainer, you may have to fill roles not assumed by others.

ROLES, OBJECTIVES, AND METHODS

How does the trainer plan effectively, given the realities of group dynamics? Two contrasting scenarios will give examples of the effective use of group dynamics to achieve instructional objectives.

Suppose that the trainer's instructional objectives are to increase the self-knowledge of management employees, to help them to understand how their behavior affects their subordinates, and to help them learn new and more effective behaviors. The trainer would want to plan a training session that would help the group arrive at stage three so that self-disclosure and feedback were achieved. This, however, could take considerable time and would be encouraged by a relaxed environment. The trainer would not be primarily a lecturer but a facilitator. The group roles would not be monopolized by the trainer, but various members of the group would be allowed to take on these roles. An examination of how the group stages and the roles were acted out by various members would probably be used as a learning device.

By contrast, to communicate information about computer fundamentals to a highly motivated group of executives, one would try to find an effective, clear, and analytic lecturer to deliver the material in the shortest possible amount of time. There would be little concern about the development of the group through stage two; the trainer does not need stage three characteristics to achieve the instructional objectives. The instructor would take on most of the task and maintenance roles in the group.

Finally, knowledge of group dynamics is essential in diagnosing problems that arise in a training session. This knowledge can help the trainer recognize that the problems in a training session are not always problems caused by his or her style or the material. They may be due to the fit of the content with the group stages or to dysfunctional roles being played by some group members. A good diagnosis of the group dynamics in a session is necessary to determine what changes should be made in the remainder of a session, or the next time the session is conducted.

SUMMARY

According to one model of group dynamics, groups generally develop through three stages. In the first, orientation, group members are typically concerned with determining what behavior will be acceptable in this group situation. The second stage, integration, involves the development of leadership and power relationships in the group. In the work stage, if it is reached, group members are willing to share information about themselves, and effective feedback is truly possible. Group member roles that help a group accomplish its goals are categorized as maintenance roles (helping the individuals develop as a group), task roles (helping the group accomplish its training tasks), and combined roles (contributing to both group maintenance and task accomplishment). Nongroup roles involve attention-getting devices, which hinder accomplishment of tasks.

This chapter has introduced the concept of group dynamics and argued that the trainer should be aware of these dynamics when designing and implementing a training session. Some of the dynamics of a group are beyond the trainer's ability to predict and therefore to consider in designing a training session. Others are beyond the trainer's ability to control even if he or she can predict them. However, the trainer does have enough knowledge and enough capability to work with the trainees to inhibit or encourage certain events and to mesh other elements of the training process (style, content, length, etc.) with group dynamics to foster the achievement of the instructional objectives.

This chapter on group process is not intended to "mystify" the training process but to introduce the occasional trainer to one of the key elements of good training design and implementation. The occasional trainer is not expected to become an expert in group processes. The full-time trainer should, however, be knowledgeable in the area and available to the occasional trainer to help with diagnosis and action.

GROUP DYNAMICS
Course Guide

PURPOSE

Each group a trainer faces has its own identity. The individual members of the group exhibit certain definable roles, which are either productive or nonproductive in meeting instructional objectives. In addition to these individual roles the trainer, especially the occasional trainer, needs to be aware of the different stages through which a group passes. The occasional trainer must recognize that nonproductive behavior is not necessarily focused toward him or her, but is a normal occurrence faced by all trainers. This module is designed to expose occasional trainers to the stages a group passes through and the typical roles that group members play.

MODULE OBJECTIVE

(As stated to trainees.) Upon completion of the module, you will be able to (1) list and define the three stages through which groups pass and (2) label and define the group member roles (task, maintenance, nongroup).

TIME

One hour

WHO

All occasional trainers responsible for developing or delivering training presentations.

TEXT AND REFERENCE MATERIAL

Instructor's Guide
Handouts
Train the Trainer by Consult, Ltd., can be borrowed from:
ETA Resource Clearinghouse
Room 8221
Patrick Henry Building
201 D. Street, N.W.
Washington, D.C. 20213

Burton, Robert L., "Group Process Demystified," pp. 190-97 in *The 1982 Annual for Facilitators, Trainers and Consultants*, edited by J. W. Pfeiffer and L. D. Goodstein (San Diego, Calif.: University Associates, Inc.).

EQUIPMENT AND SUPPLIES

Classroom

Chalkboard

Flipchart

Pens

TRAINING METHODS

Lecture

Guided Discussion

Group Exercise

DETAILED OUTLINE

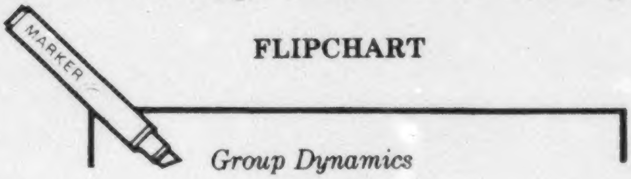
A. **Introduction to Group Dynamics—Illustrated Lecture** (5 minutes) (See Instructor's Guide for background information.)

Key points:

1. Definition
   - Understand the personality and style of the trainer and the composition of the group.
   - Attention must be paid to group dynamics in order to achieve effective training sessions.
2. Group stages and member roles
   - Small groups tend to move through characteristic and predictable stages.
   - Each stage has specific and identifiable behaviors.
   - Certain roles or functions are assumed by individual group members during the various stages.
   - Trainers should be aware of these stages and behaviors so as to keep group moving in a direction that will help achieve the chosen instructional objectives.

B. **Three-Stage Model of Group Dynamics** (10 minutes)

1. Orientation stage—the need of individual group members for being included/involved.
2. Integration stage—control needs, who has power and how it is shared.
3. Work stage—the level of trust between group members.



FLIPCHART	COMMENTS
Group Dynamics	
Three-Stage Model	
1. Orientation stage role of trainer goals of individuals group norms	Orientation has group members concerned with dependability of trainers, trainees assessment of how training will/will not meet their goals, and implicit or explicit group norms (e.g., can humor be used?). This stage will occur in every group.
2. Integration stage leadership issue power issue conflict/cohesiveness	Integration deals with leadership issues (trainer position versus trainees) and power issues (due to knowledge, job status, verbal ability). This is an area in which conflict and confrontation can take place. The occasional trainer should be prepared. It is normal and should not be viewed as open rebellion.

FLIPCHART	COMMENTS
3. Work stage trust self-disclosure	Time is needed for a group to develop to this point. Trust develops in this stage which allows for self-disclosure, or sharing information about oneself (e.g., "I have difficulty dealing with my co-worker.").

C. **Group Member Roles—Illustrated Lecture** (15 minutes) (See Instructor's Guide for background information.)

Knowledge of group member roles enables trainer to work effectively toward the instructional objectives and recognize behaviors when they occur so as not to feel threatened.

FLIPCHART	COMMENTS
Four Categories of Group Member Roles 1. Maintenance	Maintenance roles help encourage the group to do the job well and feel good about it.
2. Task	Task roles are concerned with getting the training tasks accomplished
3. Maintenance/Task	Maintenance/task roles contribute to accomplishing the task.
4. Nongroup	Nongroup roles concerned with own needs not being met and not needs of group or task to be accomplished.

Group Exercise (30 minutes)

Explain to trainees that it is important not only to recognize these various group member roles, but to accept them as a natural course of events in a training session. Some of these roles can be threatening, but can be handled if the trainer is aware of what is happening. This exercise will help them gain "observer-participant" skill in group dynamics.

1. Divide trainee group into two groups equal in number
2. Explain that one group will act as participants, the other as observers
3. Ask for three volunteers from the participant group and assign each a different nongroup role and role sheet, Handouts Nos. 2, 3, and 4 (if no volunteers select three volunteers). They are not to let other group members know assignment.
4. Pass out observer group Handout No. 1, Observation Guide, to observation group members
5. Using the participant group, run a discussion on a topic of your choice for 15 minutes with the three volunteers playing their assigned roles.
6. Reconvene group for discussion of what behaviors were observed, trainer and trainee behaviors and sharing as noted on "Observation Guide".
7. Ask group for ideas on how to handle nongroup members (blocker, avoider, dominator) and what are the responsibilities of the trainer to maintain positive group dynamics.
8. Helpful suggestions follow for use on flipchart are on Handout No. 5.
9. Handout No. 6, "Group Leadership Activities of a Trainer" can be used as helpful suggestions the occasional trainers can take with them at the end of the training session. Be sure to discuss these suggestions with specific examples given by the trainees.

GROUP DYNAMICS EXERCISE
Observation Guide

DIRECTIONS

Observe the Guided Discussion, paying close attention to the interaction between trainers and group members. Record your observations below.

1. How would you describe the communications that occurred between the group members and the trainers?

2. Was the trainer listening to and understanding each group member?

3. Did the trainer work to create a positive, conducive to learning group atmosphere?

4. How did the trainer attempt to stimulate group participation?

5. Identify specific instances in which the trainer had to display or deal with task, maintenance, and/or nongroup behavior.

6. How did the trainer attempt to handle these problem situations?

"DOMINATOR" ROLE

You are the "dominator" in this group. You keep the trainer and the program from progressing smoothly because you always have something to say!

Sample behaviors are:

- Frequently interrupting the trainer and/or participants.
- Verbalizing overly long, drawn-out opinions, personal experiences, ideas, etc.
- Demanding to take the lead in all group activities.

"BLOCKER" ROLE

Your role in the group is that of the "Blocker." Your verbal contributions are frequent, but usually counterproductive and irrelevant to this training program.

Sample behaviors are:

- Frequently arguing with the trainer and/or participants.
- Bringing up "off the subject" ideas or topics.
- Engaging in distracting "side conversations."

"AVOIDER" ROLE

Your role in the group is that of the "Avoider." Through your verbal and nonverbal behavior, you indicate to the trainer that you want no involvement in their program.

Sample behaviors are:

- Minimal verbal interaction.
- No eye contact with trainer and/or members of group.
- "Blank" facial expression.
- Defensive, "closed" body positioning.

Group Dynamics
Handout No. 5
page 1 of 1

THE "BLOCKER"	TRY THIS:
Argumentative	• Ask participant to summarize the position he or she disagrees with. • Change the subject. • Let the group handle this participant.
Off the subject	• "That's an interesting point, but let's hold it until later on." • Direct participant's attention to topic on board or visual.
Side conversations	• Stop talking and wait for side conversation to end. • Stand behind the participants who are talking. • Ask a direct question of one of the talkers.

THE "DOMINATOR"	TRY THIS:
	• Interrupt tactfully with a question or summarizing statement. • When the talker pauses, rephrase one of his/her statements, and move on. • Allow the group to cut this participant off.

THE "AVOIDER"	TRY THIS:
	• When asking a question, make eye contact with this participant. • Involve this participant in small group work and ask him or her to report back. • Ask a direct question of this person.

GROUP LEADERSHIP ACTIVITIES OF A TRAINER

- Creating situations conducive to learning
- Establishing a model of behavior
- Facilitating the flow of communications
- Participating as an expert
- Protector
- Confronter
- Member

TRAINER STYLES

For many occasional trainers the thought of standing up in front of a group is not met with great enthusiasm for reasons such as a lack of instructor training or a feeling of not being adequately equipped to conduct training. This reluctance might be due to a lack of understanding of "training" itself. Yet we all do training, whether teaching a child, helping a neighbor with a household repair problem, or advising a friend. These things come naturally to all of us. Many of the same skills used in these examples can be applied to responsibilities as trainer.

Good instructors plan their training and use effective methods and techniques that involve the learners. Good instructors also look closely at their assumptions about people and how they learn. They are aware of their interpersonal style, the impact of their behavior on others, and the strengths and weaknesses of their individual style. Awareness of these characteristics helps trainers improve their effectiveness.

Everyone holds basic assumptions about people which guide their interaction and behavior patterns. These hopes and beliefs direct the way we act around others, but often they have never been consciously or critically examined. These beliefs are often held so strongly they are not recognized as personal beliefs, but merely as "the truth." A typical assumption of this type is that people must be coerced and directed toward the achievement of learning objectives. In addition to our beliefs about the nature of people and of learning, we also have behavior patterns which may be so habitual that we are unaware of them. These unconscious behaviors can lead to situations in which trainers believe they are being attentive and supportive, totally unaware of the frowns or yawns that indicate disagreement or lack of interest.

To make training more effective, a trainer must assess his or her beliefs about learners and learning.

We need to know how our behaviors affect others and to check how well our behavior reflects our own beliefs and assumptions about how people learn. This self-examination allows us to build on our strengths and eliminate or lessen any weaknesses. These changes will also improve training sessions and make the job of training a more comfortable one.

ACHIEVING SELF-KNOWLEDGE

As a trainer you should recognize how your interpersonal style affects a group of trainees.

There are several ways occasional trainers can learn about themselves and their impact on a group of trainees. After making a training presentation, occasional trainers can solicit direct verbal or written feedback about themselves and their performance as trainers. This critique should include suggestions for alternative techniques/methods/behaviors. Feedback can be given in a group discussion or dialogue setting with the other trainees or the instructor. The effectiveness is enhanced if the presentation can be taped for play-back (preferably videotaped) so self-critiquing can be done by listening to and viewing the presentation. A self-critique is also less threatening than asking an actual group of trainees for the same information.

Paper and Pencil Instruments

Paper and pencil instruments are effective tools for learning about behaviors and their impact on a group of trainees. Using such instruments, occasional trainers answer questions about themselves. Interpreting the responses frequently provides very useful information for the occasional trainer. Most of these instruments focus on interpersonal, management, or communications style. Few of them are specifically designed to give feedback to prospective trainers. However, most of them would be extremely helpful to prospective trainers requiring only some modification to fit the training environment. (The Course Guide lists specific instruments.)

Educational Assumptions

Another dimension of trainer style is the trainer's assumptions about how people learn and how people ought to teach. Most persons, even most teaching Ph.D.'s, have given little serious thought to questions about the philosophy and practice of education. Most of us tend to unreflectively model our teaching/learning theory and behavior on our past experience. We believe that teaching and learning are quite properly done the way our parents taught us or the way we were taught by a favorite teacher or professor. Just as greater knowledge of our interpersonal style can be useful for the trainer, so can an exploration of our educational philosophy. Such an exploration would be particularly helpful if done in the light of some alternative assumptions about teaching and learning.

TRAINER STYLES INVENTORY

To illustrate the significance of teaching/learning assumptions, four styles or philosophies are outlined below. These styles are classified as Behaviorist, Structuralist, Functionalist, and Humanist. This manual draws from all four styles although the overriding philosophy is Behaviorist.

The *Behaviorist* focuses training on behavior and argues that training involves the "shaping" of end behaviors. The pure Behaviorist would not talk of changing attitudes. For many Behaviorists, attitudes are not "real" but are merely "intervening variables." Only behavior is real. Therefore, the instructor carefully constructs a session intended to reinforce ("reward") desired behaviors. What the Behaviorist is concerned about is the end product, the desired behavior. The product is central to the process.

The *Structuralist* focuses on breaking down the content of the training session, properly organizing the content, and feeding the content to the trainee bit by bit. Structuralists believe that the mind is like a computer and will store the information entered by the trainer/programmer, who must keep the students awake and alert while he feeds in the data. The trainer is very much in control, just as the programmer is in control of the computer. The process is trainer-centered.

The *Functionalist* emphasizes learning by doing and maintains that individuals learn best when what they learn is practical or

ON THE OTHER HAND, THEORY K-4 STATES THAT...

directly useful to them. Unless the process or product motivate the learners, they will not learn. This approach emphasizes learning in a problem-solving context. Therefore, the trainer organizes the experience so that the learner is involved in tasks. The process is task-oriented and learner-centered.

No matter what style "label" applies to you, try to be open to changes that might enhance your training style.

The *Humanist* believes that persons will "grow" naturally and that they will develop and therefore learn if the learning process is not somehow inhibited by outside conditions and other persons. Motivation is already present in the individual: the job of the teacher/facilitator is to provide the conditions for its expression. Really significant learning leads to a better understanding of self and others. Learning which is not thus connected to personal experience is frequently thought to be quite unimportant. Becoming a better (and this often means more fully developed) human being is considered an appropriate learning goal. This kind of learning process with its focus on reflection, authenticity, and equality can be very time-consuming. The learning process itself is relationship-centered.

The focus of the Training Style Inventory is more conceptual than many of the interpersonal style instruments. Hence, it may be easier for a trainer to change his or her ideas about teaching and learning than, for example, to change an unconscious need to be "in charge." However, it is important to recall that our needs are frequently related to our educational philosophy; the latter is supported by the former.

SUMMARY

There are various trainer styles, and each has advantages and limitations. Trainers need to assess their own behavior and how it affects groups of trainees. Paper and pencil instruments (examples are noted in the Course Guide) can help with such assessment. Trainers also need to reflect on their own educational philosophy. This reflection can be quite helpful if done in conjunction with consideration of alternatives. Once trainers understand their own styles, they should use those strengths of their style which keep them focused on the trainees. A few guidelines keep the trainer learner-oriented regardless of training style:

1. *Be supportive.* The trainer helps trainees by acting to reduce excessive conflict, behaving in a warm and friendly manner, encouraging trainees to try difficult things, and supporting varying views suggested by the trainees.

2. *Don't be judgmental.* Remove critical tone and phrases from comments you make. Use descriptive phrases and nonjudgmental words; "should do" is changed to "could do," and "that's wrong!" is changed to "if you act that way the effects might be."

3. *Respect the feelings of others.* Pay attention to the fears and anxieties of the trainees. Feelings of fear and anxiety make it difficult to learn. Emotions are legitimate and should be accepted.

4. *Give clear instructions.* Trainees want clear, explicit directions. Instructions should describe a specific task with all limitations included, such as performance standards and time constraints.

5. *Know the training materials.* As a trainer, you cannot be relaxed and effective if you are unsure of the content. Be confident enough to accept other opinions and input.

6. *Have a desire to help.* Trainers should be motivated to help trainees learn. The position of trainer can carry a feeling of power with it, but power does not cause learning. Training is a success when the trainees realize that they have learned something that will help them in their work, and that it has been presented by someone who cares.

7. *Be congruent.* Make your actions consistent with what you say. Have the training session run in such a way that trainees are willing to participate. This atmosphere of openness will develop only if you as the trainer are open.

TRAINER STYLE
Course Guide

PURPOSE

All trainers develop their own training style. This module is designed to enable trainees to find the strengths of their individual training styles. Success as a trainer refers to how well the trainees learned what they were supposed to learn. Attention to understanding one's styles, improving individual style strengths, and limiting style weaknesses will enhance an occasional trainer's effectiveness.

MODULE OBJECTIVES

(As stated to trainees.) Upon completion of this module, you will be able to (1) identify four trainer styles and (2) identify your own training style.

TIME

One hour, 30 minutes

WHO

All occasional trainers responsible for developing or delivering presentations.

TEXT AND REFERENCE MATERIAL

Instructor's Guide

Brostrom, Richard. "Training Style Inventory," in *The 1979 Annual Handbook for Group Facilitators,* William J. Pfeiffer and Leonard D. Goodstein, eds. San Diego, Calif.: University Associates, Inc., 1979.

EQUIPMENT AND SUPPLIES

Classroom

Flipchart

Pens

Brostrom's Training Style Inventory

TRAINING METHODS

Lecture

Individual Exercise

Small Group Exercise

Guided Discussion

DETAILED OUTLINE

A. **Introduction to Trainer Styles—Lecture** (10 minutes) (See Instructor's Guide for background information.)

Include a brief overview of how individual assumptions about learning and behavior patterns impact on a group of trainees:

1. Trainers' own needs and interests affect their style.
2. Trainers' own beliefs on how people learn (by thinking, doing, discussing) affect how they train.
3. Trainees should feel training is of practical use and benefit to job.
4. Trainees are adults, and trainers can encourage them to learn by recognizing the possibilities of human growth and development and the trainees' interests in being self-directed and accepting of responsibility.

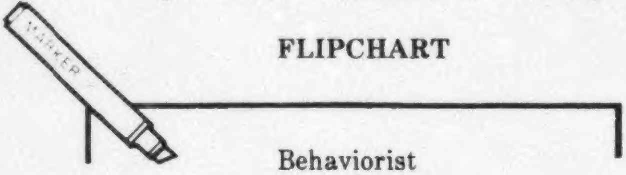
FLIPCHART	**COMMENTS**
Trainer behavior patterns	Trainers behaviors and attitudes effect view of training.
Trainer assumptions about learning	Trainers need to keep "learner-oriented" despite attitudes about learning.
	Trainers must remember that trainees are adults.

B. **Instruments for Assessing Training Styles—Lecture** (20 minutes)

1. Briefly explain critues of practice and pencil and paper instruments. (See instructors guide and references.) Note that instruments are like mirrors, but the reflection of ourselves in these mirrors is not always totally accurate. Sometimes the instruments may be like fun-house mirrors, they may make the individual look taller or fatter than they are. Therefore, do not accept the results of these instruments as the absolute truth about yourself.
2. Remember that all such instruments measure the current reality but they do not necessarily measure what an individual can become. They don't measure what is possible for an individual should that individual desire to change.
3. Check the results of the instrument against your own view of yourself. Do the scores seem to accurately reflect yourself as you understand yourself?
4. Verify the profile of yourself provided by the instrument with a friend who knows you well and will tell you the truth about how he/she sees you.

C. **Training Style Inventory—Lecture, Individual Exercise, Small Group Exercise** (60 minutes)

1. Lecture on Brostrom's inventory and the four basic trainer styles. (See instructor's guide and Brostrom's inventory.) The instructor conducting this session should complete this instrument before leading the exercise.



FLIPCHART	**COMMENTS**
Behaviorist	Behaviorist focuses training on behavior.
Structuralist	Structuralist focuses on organizing the content of the training.
Functionalist	Functionalist focuses on learning by doing.
Humanist	Humanist focuses on the natural "growth" of people.

2. After answering questions, hand out the instrument to trainees, read the directions, and ask trainees to complete the inventory. When this is complete, give scoring directions and have trainees score their own inventory.
3. As the session leader put your score on the board and comment on its implications for you as a trainer. Also comment on how it matches or conflicts with your own beliefs and assumptions about your style.
4. Divide the group into subgroups of four. Have each trainee put their scores on flipcharts. In each group, have one individual at a time share their score with the others in their small group and discuss with the group the implication of their scores for themselves as trainers. Each individual takes a turn at sharing and discussing their score until each member in the small group has had an opportunity to do so.
5. If time permits bring the whole group back together and discuss what was learned from the exercise. Key questions include: What did you learn about your own style? In what areas do you agree/disagree with the results of the inventory?

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U.S. Department of Labor
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